

9.12.2. 99% BANDWIDTH

Page 169 of 845

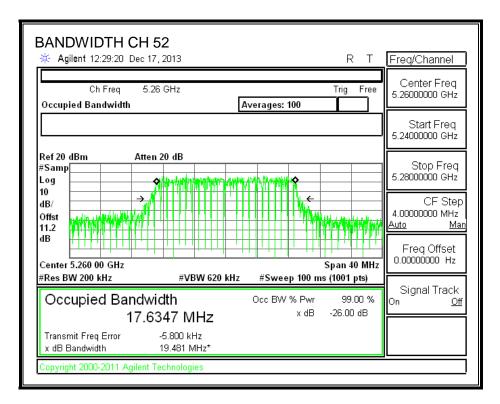
REPORT NO: 15U21905-E1V3 MODEL: ID:072 LIMITS DATE: March 31, 2016 FCC ID: DKNWWT

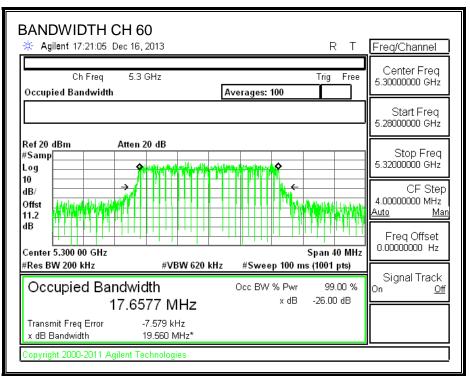
None; for reporting purposes only.

RESULTS

| Channel Frequence | | 99% Bandwidth |
|-------------------|-------|---------------|
| | (MHz) | (MHz) |
| 52 | 5260 | 17.6347 |
| 60 | 5300 | 17.6577 |
| 64 | 5320 | 17.6453 |

Page 170 of 845





Page 171 of 845

REPORT NO: 15U21905-E1V3 MODEL: ID:072

| BANDWIDTH CH 64 Agilent 17:21:54 Dec 16, 2013 R T Ch Freq 5.32 GHz Trig Free Occupied Bandwidth Averages: 100 | Freq/Channel Center Freq 5.32000000 GHz |
|--|---|
| | Start Freq 5.3000000 GHz |
| Ref 20 dBm Atten 20 dB #Samp | Stop Freq 5.34000000 GHz CF Step 4.00000000 MHz <u>Auto</u> Freq Offset 0.00000000 Hz |
| Occupied Bandwidth Occ BW % Pwr 99.00 % 17.6453 MHz x dB -26.00 dB Transmit Freq Error -4.843 kHz 483 aHz x dB Bandwidth 19.628 MHz* -26.00 dB | Signal Track On <u>Off</u> |

Page 172 of 845

REPORT NO: 15U21905-E1V3 MODEL: ID:072 9.12.3. AVERAGE POWER

<u>LIMITS</u>

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 11.19 dB (including 10 dB pad and 1.19 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

| Channel | Frequency | Power |
|---------|-----------|-------|
| | (MHz) | (dBm) |
| 52 | 5260 | 20.05 |
| 60 | 5300 | 20.90 |
| 64 | 5320 | 19.96 |

Page 173 of 845

REPORT NO: 15U21905-E1V3 MODEL: ID:072 9.12.4. OUTPUT POWER AND PPSD

<u>LIMITS</u>

FCC §15.407 (a) (2)

For the band 5.25–5.35 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 peak 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.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

| Antenna | |
|---------|--|
| Gain | |
| (dBi) | |
| 2.40 | |

Page 174 of 845

Bandwidth and Antenna Gain

| Channel | Frequency | Min | Min | Directional |
|---------|-----------|-------|-------|-------------|
| | | 26 dB | 99% | Gain |
| | | BW | BW | |
| | (MHz) | (MHz) | (MHz) | (dBi) |
| 52 | 5260 | 20.6 | 17.6 | 2.40 |
| 60 | 5300 | 20.6 | 17.7 | 2.40 |
| 64 | 5320 | 20.6 | 17.6 | 2.40 |

Limits

| Channel | Frequency | FCC | IC | IC | Power | FCC | IC | PPSD |
|---------|-----------|-------|-------|-------|-------|-------|-------|-------|
| | | Power | Power | EIRP | Limit | PPSD | PSD | Limit |
| | | Limit | Limit | Limit | | Limit | Limit | |
| | (MHz) | (dBm) |
| 52 | 5260 | 24.00 | 23.46 | 29.46 | 23.46 | 11.00 | 11.00 | 11.00 |
| 60 | 5300 | 24.00 | 23.47 | 29.47 | 23.47 | 11.00 | 11.00 | 11.00 |
| 64 | 5320 | 24.00 | 23.47 | 29.47 | 23.47 | 11.00 | 11.00 | 11.00 |

Duty Cycle CF (dB)0.22Included in Calculations of Corr'd Power & PPSD

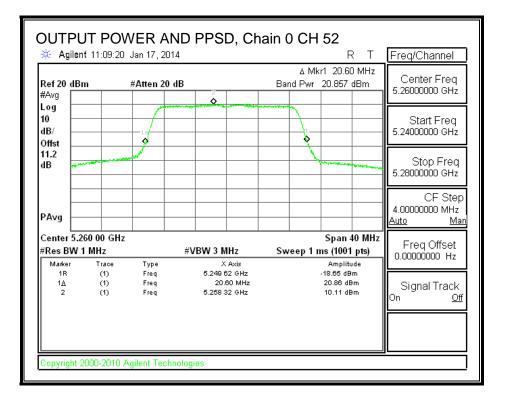
Output Power Results

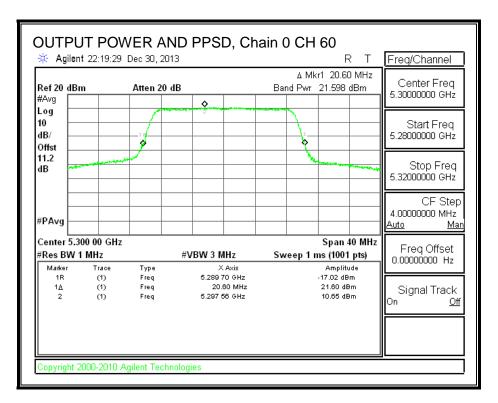
| Channel | Frequency | Chain 0 | Total | Power | Power |
|---------|-----------|---------|--------|-------|--------|
| | | Meas | Corr'd | Limit | Margin |
| | | Power | Power | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dB) |
| 52 | 5260 | 20.86 | 21.08 | 23.46 | -2.39 |
| 60 | 5300 | 21.60 | 21.82 | 23.47 | -1.65 |
| 64 | 5320 | 20.67 | 20.89 | 23.47 | -2.57 |

PPSD Results

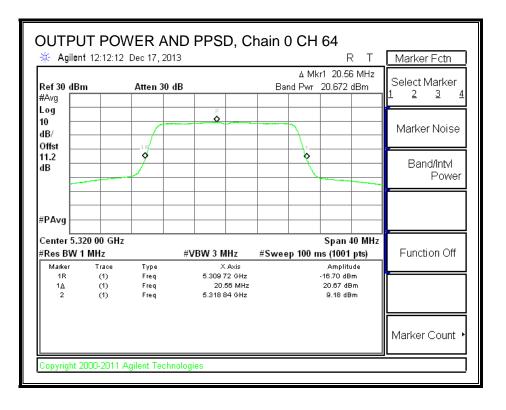
| Channel | Frequency | Chain 0 | Total | PPSD | PPSD |
|---------|-----------|---------|--------|-------|--------|
| | | Meas | Corr'd | Limit | Margin |
| | | PPSD | PPSD | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dB) |
| 52 | 5260 | 10.11 | 10.33 | 11.00 | -0.67 |
| 60 | 5300 | 10.65 | 10.87 | 11.00 | -0.13 |
| 64 | 5320 | 9.18 | 9.40 | 11.00 | -1.60 |

Page 175 of 845





Page 176 of 845



Page 177 of 845

9.13. 802.11n HT20 3TX CDD MODE IN THE 5.3 GHz BAND

9.13.1. 26 dB BANDWIDTH

<u>LIMITS</u>

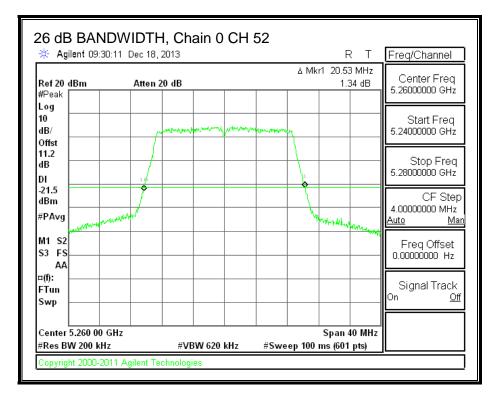
None; for reporting purposes only.

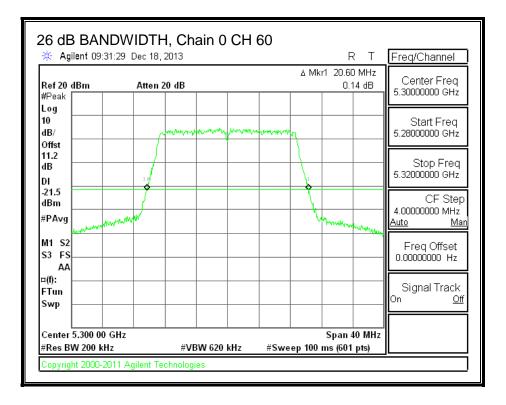
<u>RESULTS</u>

| Channel | Frequency | 26 dB BW | 26 dB BW | 26 dB BW |
|---------|-----------|----------|----------|----------|
| | | Chain 0 | Chain 1 | Chain 2 |
| | (MHz) | (MHz) | (MHz) | (MHz) |
| 52 | 5260 | 20.53 | 20.40 | 20.53 |
| 60 | 5300 | 20.60 | 20.60 | 20.60 |
| 64 | 5320 | 20.53 | 20.53 | 20.60 |

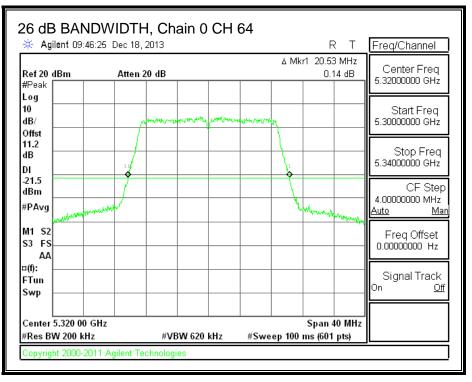
Page 178 of 845

26 dB BANDWIDTH, Chain 0

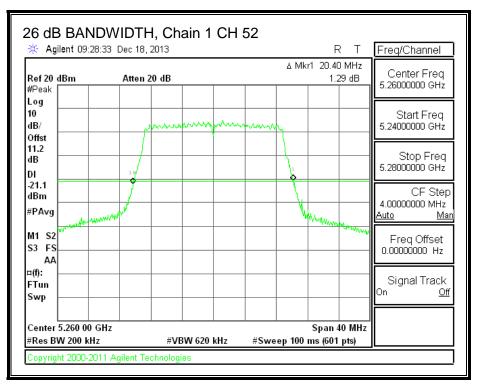




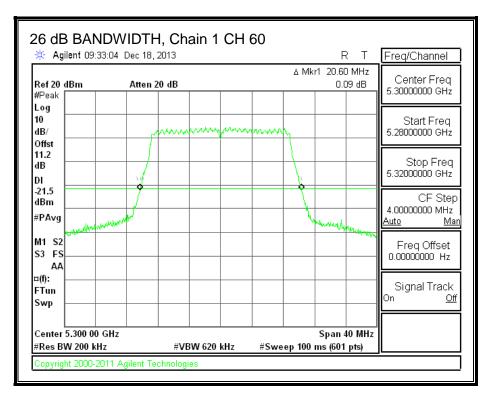
Page 179 of 845

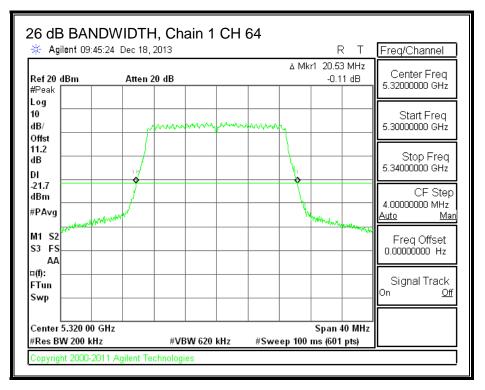


26 dB BANDWIDTH, Chain 1

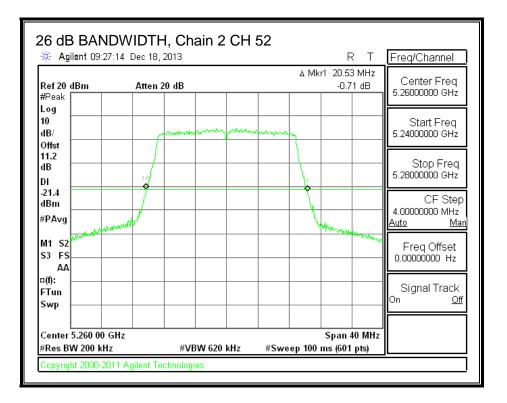


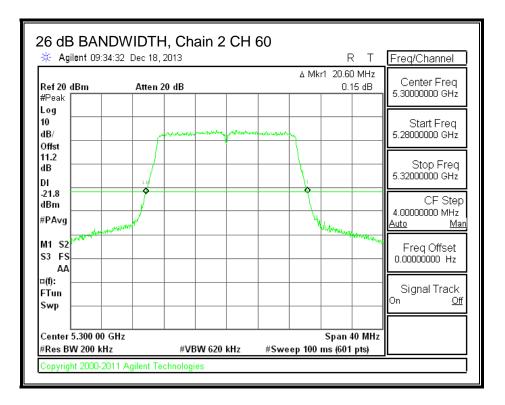
Page 180 of 845



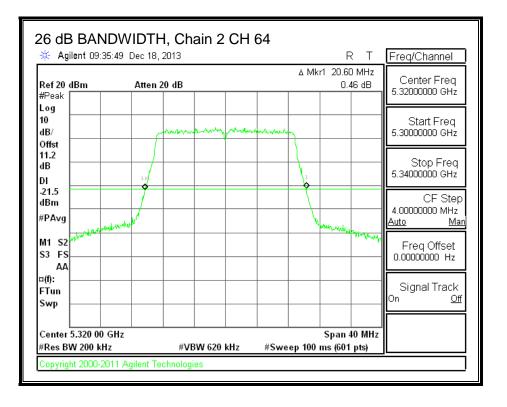


Page 181 of 845





Page 182 of 845



Page 183 of 845

LIMITS

None; for reporting purposes only.

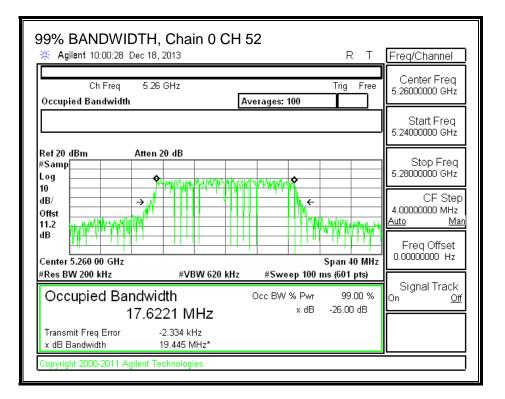
<u>RESULTS</u>

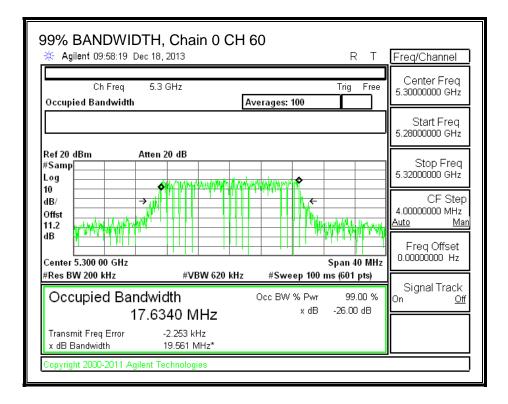
| Channel | Frequency | 99% BW | 99% BW | 99% BW |
|---------|-----------|-----------------|---------|---------|
| | | Chain 0 Chain 1 | | Chain 2 |
| | (MHz) | (MHz) | (MHz) | (MHz) |
| 52 | 5260 | 17.6221 | 17.6195 | 17.6252 |
| 60 | 5300 | 17.6340 | 17.6435 | 17.6368 |
| 64 | 5320 | 17.6309 | 17.6391 | 17.6283 |

Page 184 of 845

REPORT NO: 15U21905-E1V3 MODEL: ID:072 99% BANDWIDTH

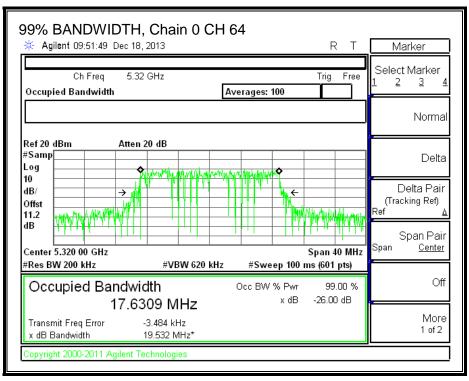
99% BANDWIDTH, Chain 0



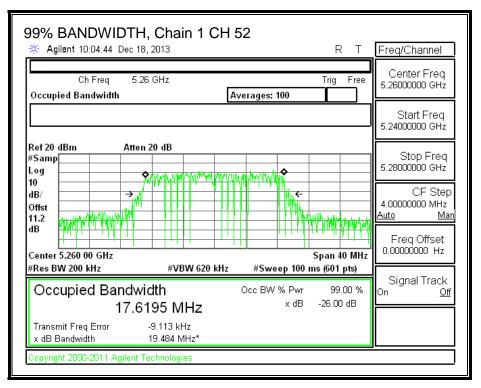


Page 185 of 845

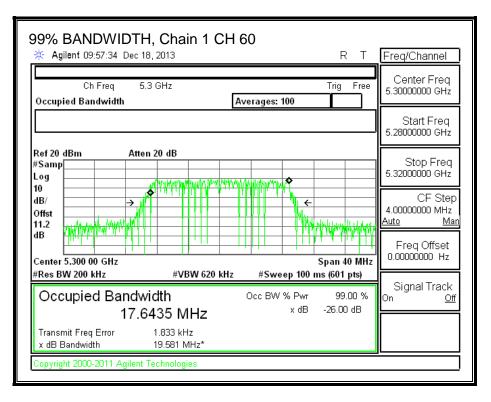
REPORT NO: 15U21905-E1V3 MODEL: ID:072

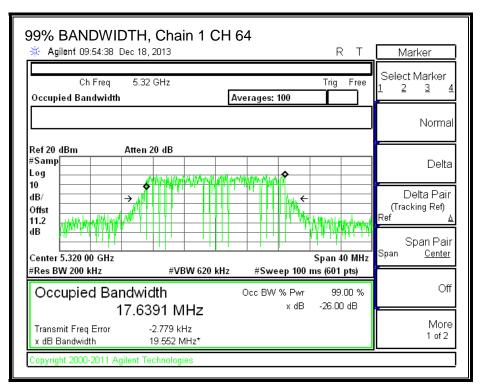


99% BANDWIDTH, Chain 1

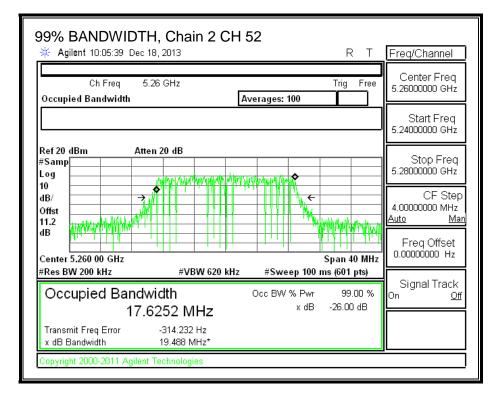


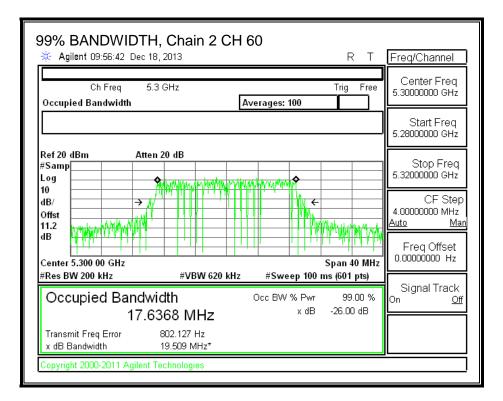
Page 186 of 845





Page 187 of 845





Page 188 of 845

| 99% BANDWIDTH, Chain 2 CH 64 | Marker |
|--|--|
| Ch Freq 5.32 GHz Trig Free Occupied Bandwidth Averages: 100 | Select Marker 1 <u>2 3</u> 4 |
| | Normal |
| Ref 20 dBm Atten 20 dB #Samp | Delta |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | Delta Pair (Tracking Ref) Ref <u>∆</u> |
| dB (100 h) h 1 h 1 h 1 h 1 h 1 h 1 h 1 h 1 h 1 | Span Pair Span <u>Center</u> |
| Occupied Bandwidth Occ BW % Pwr 99.00 % 17.6283 MHz × dB -26.00 dB | Off |
| Transmit Freq Error -3.090 kHz x dB Bandwidth 19.543 MHz* | More 1 of 2 |
| Copyright 2000-2011 Agilent Technologies | |

Page 189 of 845

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 11.19 dB (including 10 dB pad and 1.19 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

Average Power Results

| Channel | Frequency | Chain 0 Chain 1 Chain 2 | | Chain 2 | Total |
|---------|-----------|-------------------------|-------|---------|-------|
| | | Power | Power | Power | Power |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) |
| 52 | 5260 | 13.87 | 14.26 | 14.33 | 18.93 |
| 60 | 5300 | 14.83 | 15.05 | 15.36 | 19.86 |
| 64 | 5320 | 14.02 | 14.24 | 14.25 | 18.94 |

Page 190 of 845

<u>LIMITS</u>

FCC §15.407 (a) (2)

For the band 5.25–5.35 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 peak 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.

DIRECTIONAL ANTENNA GAIN

The TX chains are correlated and the antenna gain is the same for each chain. The directional gain is:

| Antenna | 10 * Log (3 chains) | Correlated Chains |
|---------|---------------------|--------------------------|
| Gain | | Directional Gain |
| (dBi) | (dB) | (dBi) |
| 2.40 | 4.77 | 7.17 |

Page 191 of 845

Bandwidth and Antenna Gain

| Channel | Frequency | Min | Min | Directional | Directional |
|---------|-----------|-------|---------|-------------|-------------|
| | | 26 dB | 99% | Gain | Gain |
| | | BW | BW | for Power | for PPSD |
| | (MHz) | (MHz) | (MHz) | (dBi) | (dBi) |
| 52 | 5260 | 20.40 | 17.6195 | 2.40 | 7.17 |
| 60 | 5300 | 20.60 | 17.6340 | 2.40 | 7.17 |
| 64 | 5320 | 20.53 | 17.6283 | 2.40 | 7.17 |

Limits

| Channel | Frequency | FCC | IC | IC | Power | FCC | IC | PPSD |
|---------|-----------|-------|-------|-------|-------|-------|-------|-------|
| | | Power | Power | EIRP | Limit | PPSD | PSD | Limit |
| | | Limit | Limit | Limit | | Limit | Limit | |
| | (MHz) | (dBm) |
| 52 | 5260 | 24.00 | 23.46 | 29.46 | 23.46 | 9.83 | 11.00 | 9.83 |
| 60 | 5300 | 24.00 | 23.46 | 29.46 | 23.46 | 9.83 | 11.00 | 9.83 |
| 64 | 5320 | 24.00 | 23.46 | 29.46 | 23.46 | 9.83 | 11.00 | 9.83 |

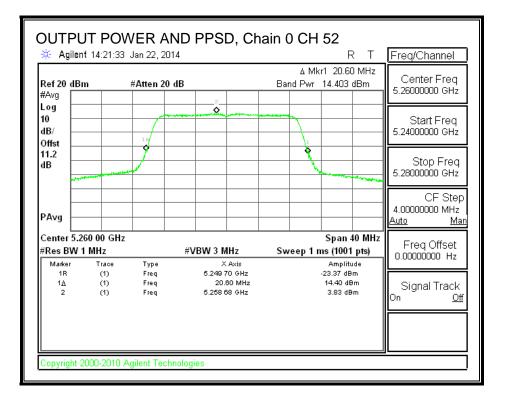
Duty Cycle CF (dB) 0.22 Included in Calculations of Corr'd Power & PPSD

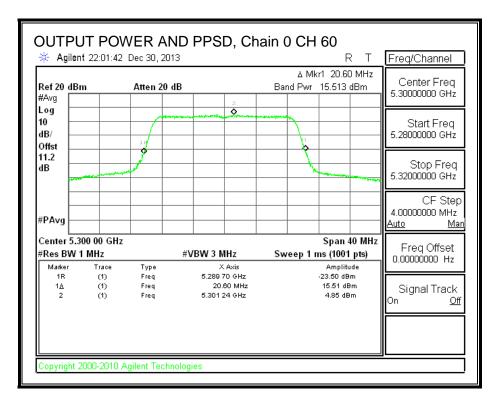
Output Power Results

| Channel | Frequency | Chain 0 | Chain 1 | Chain 2 | Total | Power | Power |
|---------|-----------|---------|---------|---------|--------|-------|--------|
| | | Meas | Meas | Meas | Corr'd | Limit | Margin |
| | | Power | Power | Power | Power | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dBm) | (dB) |
| 52 | 5260 | 14.40 | 14.55 | 14.75 | 19.56 | 23.46 | -3.90 |
| 60 | 5300 | 15.51 | 15.58 | 16.01 | 20.70 | 23.46 | -2.77 |
| 64 | 5320 | 14.67 | 15.04 | 15.14 | 19.95 | 23.46 | -3.52 |

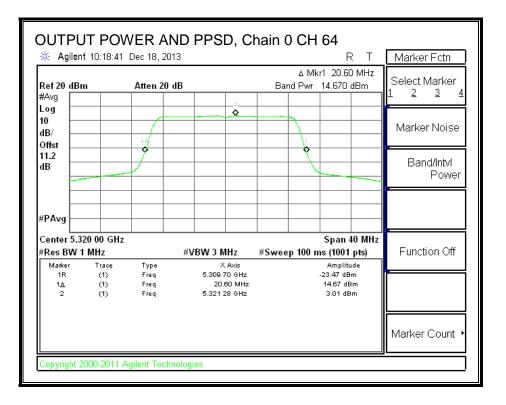
PPSD Results

| Channel | Frequency | Chain 0 | Chain 1 | Chain 2 | Total | PPSD | PPSD |
|---------|-----------|---------|---------|---------|--------|-------|--------|
| | | Meas | Meas | Meas | Corr'd | Limit | Margin |
| | | PPSD | PPSD | PPSD | PPSD | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dBm) | (dB) |
| 52 | 5260 | 3.83 | 4.03 | 4.27 | 9.04 | 9.83 | -0.79 |
| 60 | 5300 | 4.85 | 4.76 | 4.74 | 9.78 | 9.83 | -0.05 |
| 64 | 5320 | 3.01 | 3.46 | 3.59 | 8.35 | 9.83 | -1.48 |

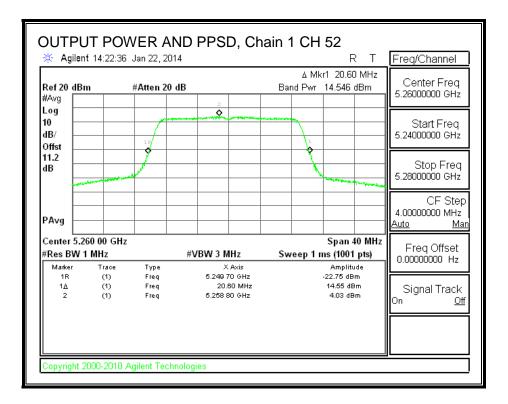




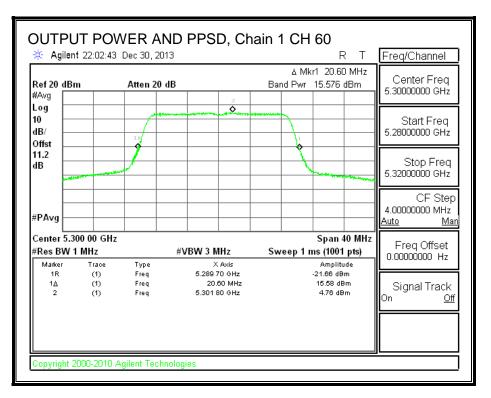
Page 193 of 845

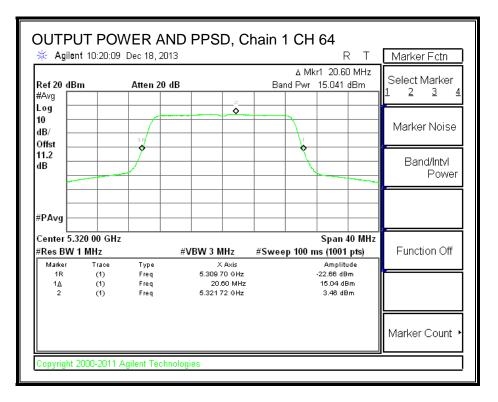


OUTPUT POWER AND PPSD, Chain 1



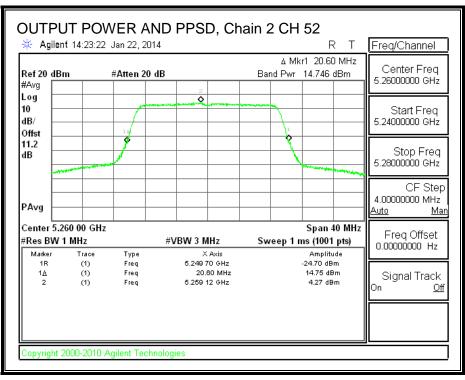
Page 194 of 845

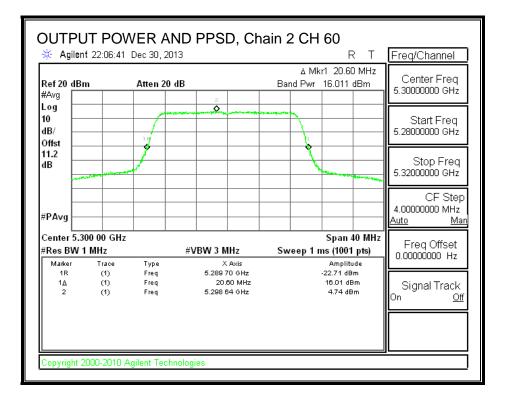




OUTPUT POWER AND PPSD, Chain 2

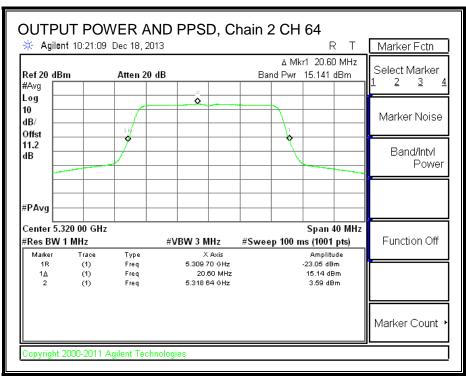
Page 195 of 845





Page 196 of 845

REPORT NO: 15U21905-E1V3 MODEL: ID:072



Page 197 of 845

9.14. 802.11n HT20 3TX SDM MODE IN THE 5.3 GHz BAND

9.14.1. 26 dB BANDWIDTH

LIMITS

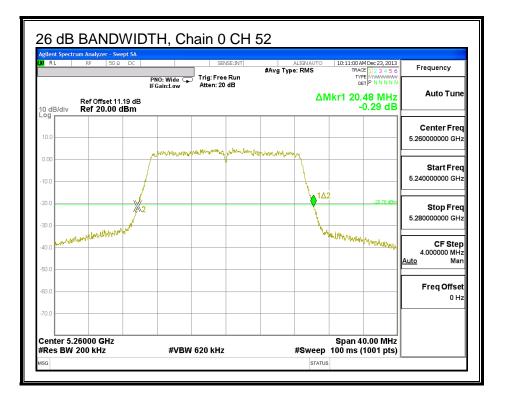
None; for reporting purposes only.

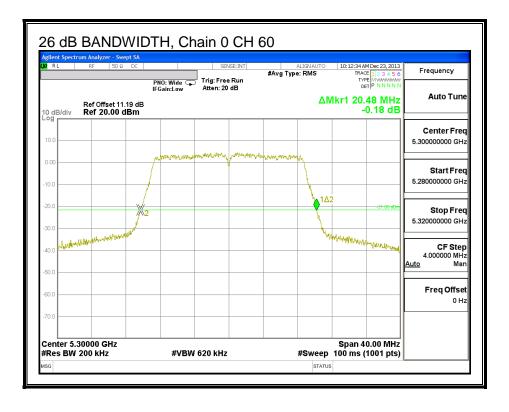
<u>RESULTS</u>

| Channel | Frequency | 26 dB BW | 26 dB BW | 26 dB BW |
|---------|-----------|----------|----------|----------|
| | | Chain 0 | Chain 1 | Chain 2 |
| | (MHz) | (MHz) | (MHz) | (MHz) |
| 52 | 5260 | 20.48 | 20.44 | 20.36 |
| 60 | 5300 | 20.48 | 20.44 | 20.40 |
| 64 | 5320 | 20.56 | 20.44 | 20.40 |

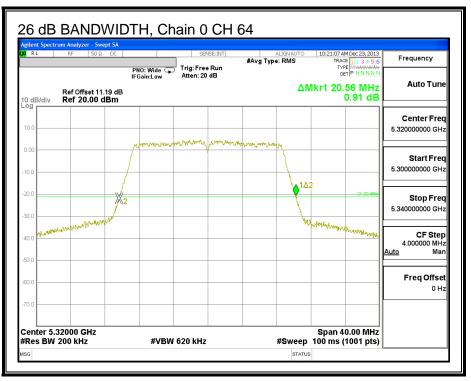
Page 198 of 845

26 dB BANDWIDTH, Chain 0

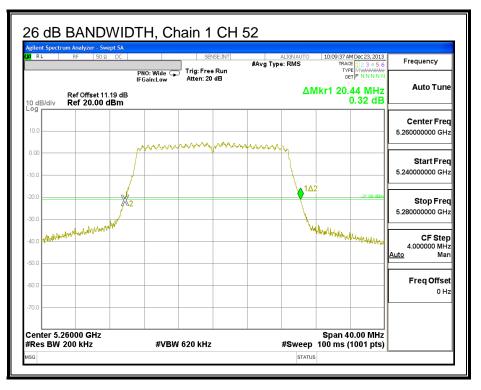




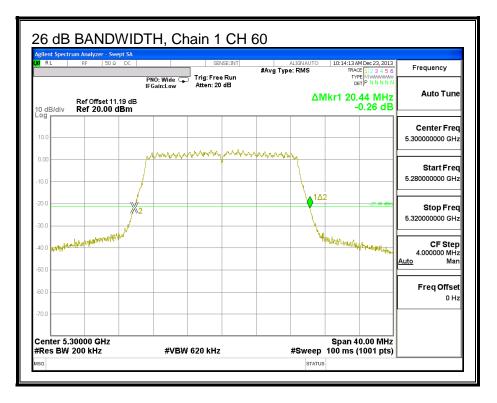
Page 199 of 845

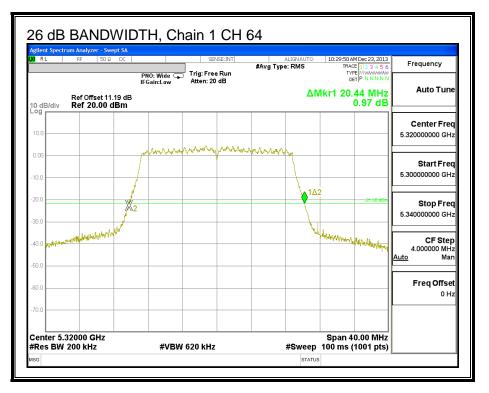


26 dB BANDWIDTH, Chain 1

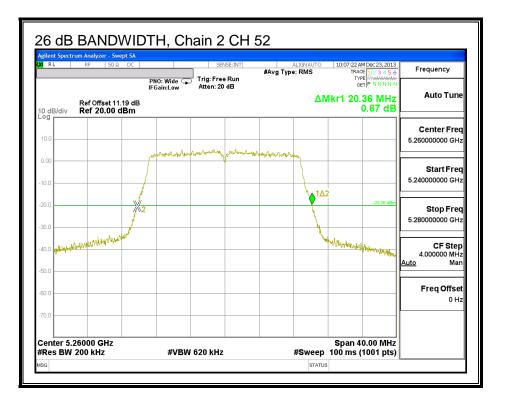


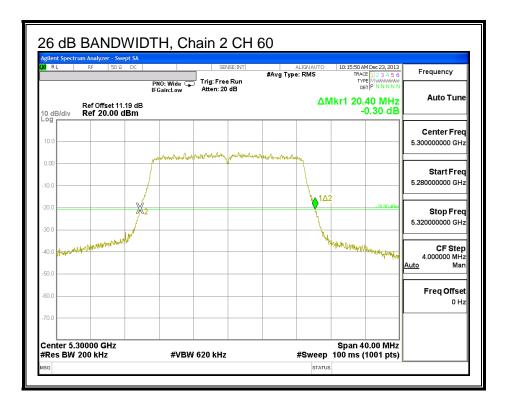
Page 200 of 845



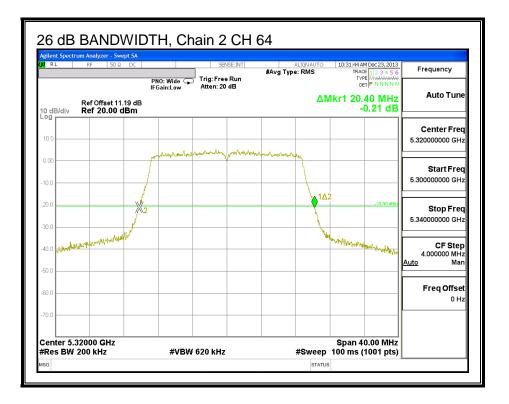


Page 201 of 845





Page 202 of 845



Page 203 of 845

LIMITS

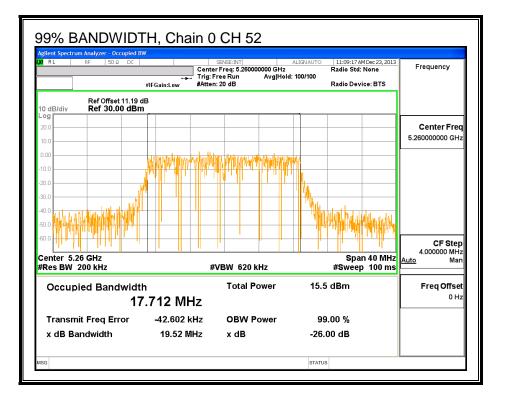
None; for reporting purposes only.

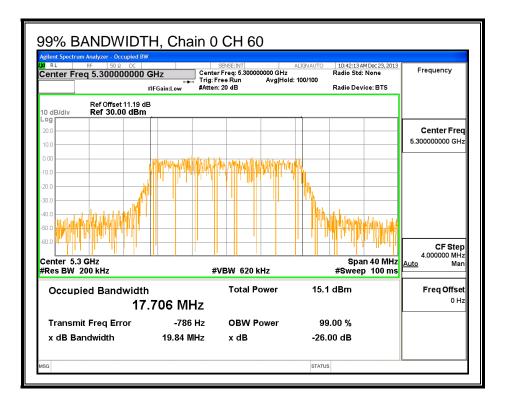
<u>RESULTS</u>

| Channel | Frequency | 99% BW | 99% BW | 99% BW | |
|---------|-----------|-----------------|--------|---------|--|
| | | Chain 0 Chain 1 | | Chain 2 | |
| | (MHz) | (MHz) | (MHz) | (MHz) | |
| 52 | 5260 | 17.712 | 17.672 | 17.761 | |
| 60 | 5300 | 17.706 | 17.739 | 17.661 | |
| 64 | 5320 | 17.671 | 17.653 | 17.683 | |

Page 204 of 845

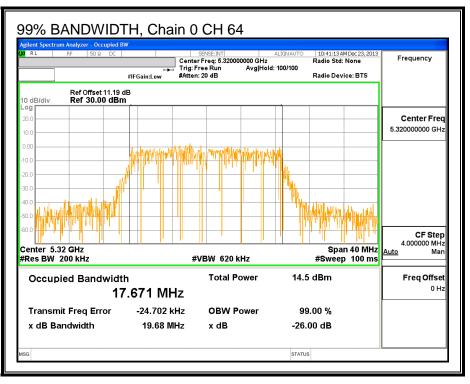
99% BANDWIDTH, Chain 0



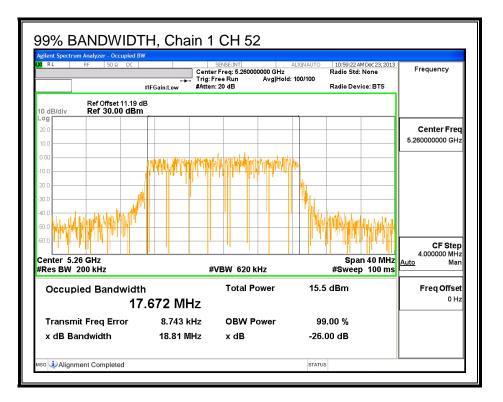


Page 205 of 845

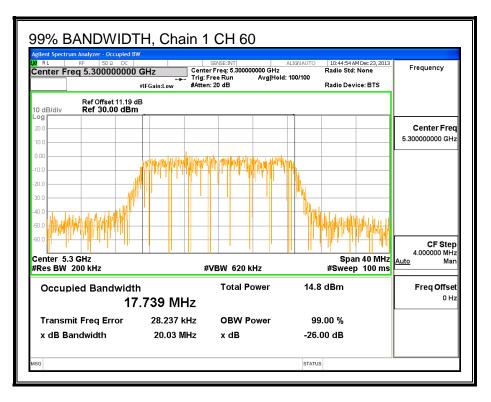
UL VERIFICATION SERVICES INC. 47173 BENICIA STREET, FREMONT, CA 94538, USA This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc. .

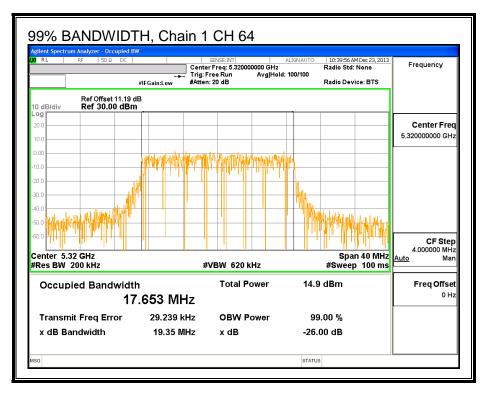


99% BANDWIDTH, Chain 1

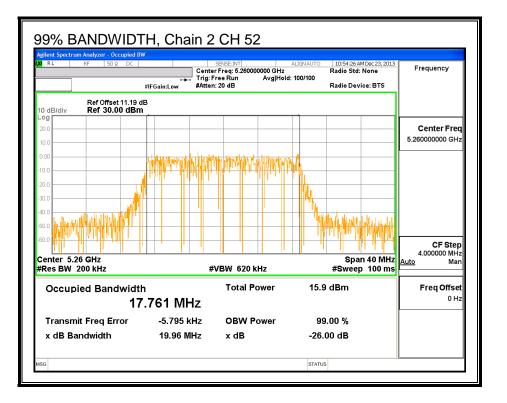


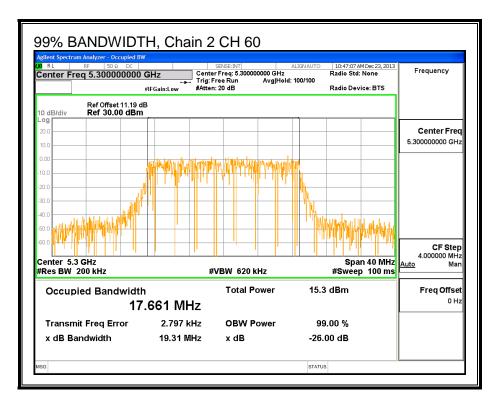
Page 206 of 845



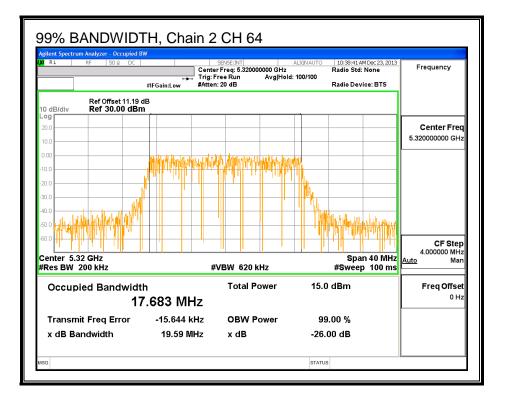


Page 207 of 845





Page 208 of 845



Page 209 of 845

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 11.19 dB (including 10 dB pad and 1.19 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

Average Power Results

| Channel | Frequency | Chain 0 | Chain 1 | Chain 2 | Total |
|---------|-----------|---------|---------|---------|-------|
| | | Power | Power | Power | Power |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) |
| 52 | 5260 | 16.01 | 16.22 | 16.63 | 21.07 |
| 60 | 5300 | 15.96 | 16.08 | 16.40 | 20.92 |
| 64 | 5320 | 15.53 | 15.48 | 15.88 | 20.40 |

Page 210 of 845

REPORT NO: 15U21905-E1V3 MODEL: ID:072 9.14.4. OUTPUT POWER AND PPSD

<u>LIMITS</u>

FCC §15.407 (a) (2)

For the band 5.25–5.35 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 peak 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.

DIRECTIONAL ANTENNA GAIN

The TX chains are uncorrelated and the antenna gain is the same for each chain. The directional gain is equal to the antenna gain.

| Antenna | |
|---------|--|
| Gain | |
| (dBi) | |
| 2.40 | |

Page 211 of 845

Bandwidth and Antenna Gain

| Channel | Frequency | Min | Min | Directional | Directional |
|---------|-----------|-------|------------|-------------|-------------|
| | | 26 dB | 99% | Gain | Gain |
| | | BW | BW | for Power | for PPSD |
| | (MHz) | (MHz) | (MHz) | (dBi) | (dBi) |
| 52 | 5260 | 20.36 | 17.6720 | 2.40 | 2.40 |
| 60 | 5300 | 20.40 | 17.6610 | 2.40 | 2.40 |
| 64 | 5320 | 20.40 | 17.6530 | 2.40 | 2.40 |

Limits

| Channel | Frequency | FCC | IC | IC | Power | FCC | IC | PPSD |
|---------|-----------|-------|-------|-------|-------|-------|-------|-------|
| | | Power | Power | EIRP | Limit | PPSD | PSD | Limit |
| | | Limit | Limit | Limit | | Limit | Limit | |
| | (MHz) | (dBm) |
| 52 | 5260 | 24.00 | 23.47 | 29.47 | 23.47 | 11.00 | 11.00 | 11.00 |
| 60 | 5300 | 24.00 | 23.47 | 29.47 | 23.47 | 11.00 | 11.00 | 11.00 |
| 64 | 5320 | 24.00 | 23.47 | 29.47 | 23.47 | 11.00 | 11.00 | 11.00 |

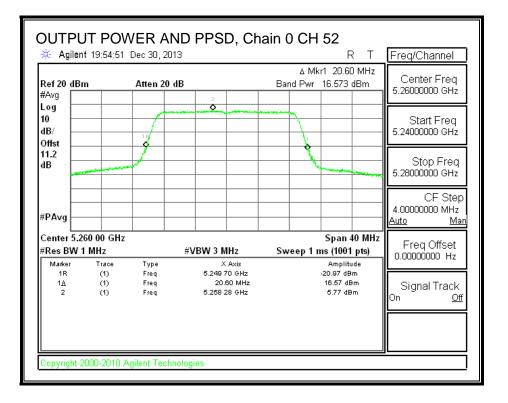
| Duty Cycle CF (dB) 0.17 Included in Calculations | s of Corr'd Power & PPSD |
|--|--------------------------|
|--|--------------------------|

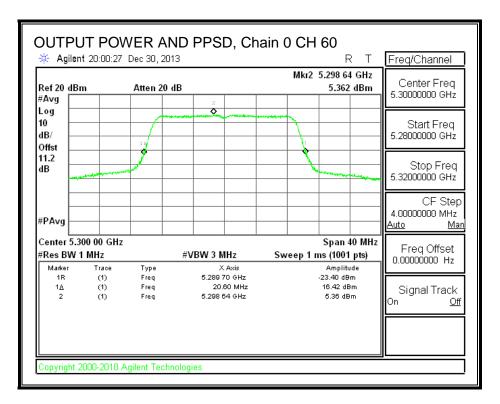
Output Power Results

| Channel | Frequency | Chain 0 | Chain 1 | Chain 2 | Total | Power | Power |
|---------|-----------|---------|---------|---------|--------|-------|--------|
| | | Meas | Meas | Meas | Corr'd | Limit | Margin |
| | | Power | Power | Power | Power | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dBm) | (dB) |
| 52 | 5260 | 16.57 | 16.65 | 16.94 | 21.66 | 23.47 | -1.81 |
| 60 | 5300 | 16.42 | 16.62 | 16.84 | 21.57 | 23.47 | -1.90 |
| 64 | 5320 | 15.81 | 15.82 | 16.42 | 20.97 | 23.47 | -2.50 |

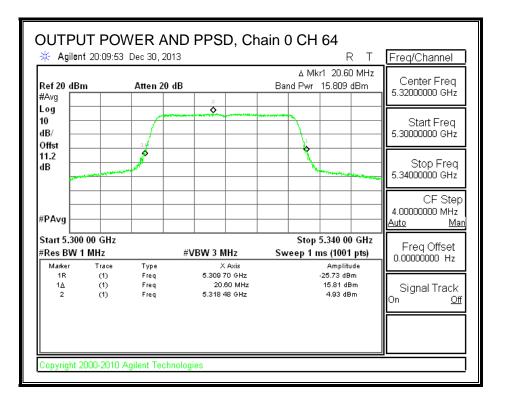
PPSD Results

| Channel | Frequency | Chain 0 | Chain 1 | Chain 2 | Total | PPSD | PPSD |
|---------|-----------|---------|---------|---------|--------|-------|--------|
| | | Meas | Meas | Meas | Corr'd | Limit | Margin |
| | | PPSD | PPSD | PPSD | PPSD | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dBm) | (dB) |
| 52 | 5260 | 5.77 | 6.07 | 5.89 | 10.85 | 11.00 | -0.15 |
| 60 | 5300 | 5.36 | 5.78 | 5.91 | 10.63 | 11.00 | -0.37 |
| 64 | 5320 | 4.93 | 5.11 | 5.50 | 10.13 | 11.00 | -0.87 |

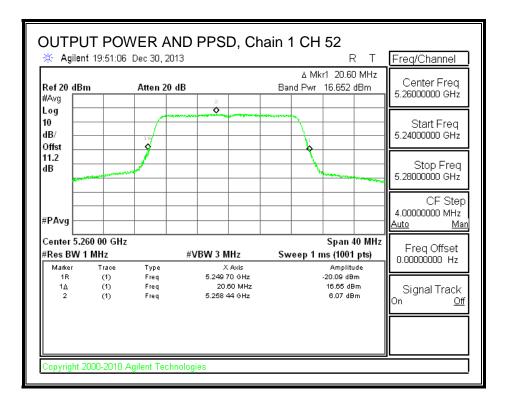




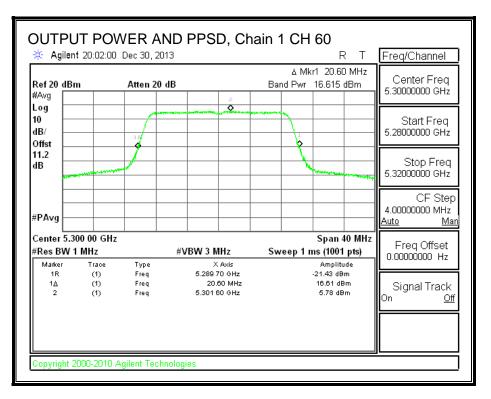
Page 213 of 845

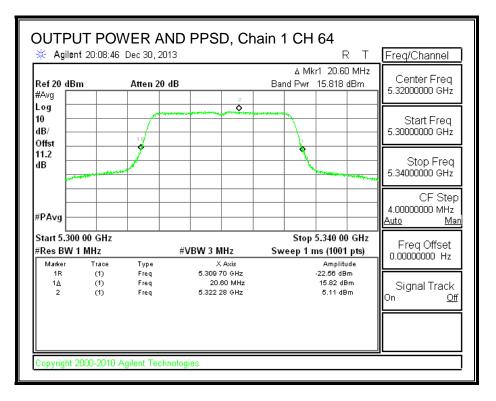


OUTPUT POWER AND PPSD, Chain 1

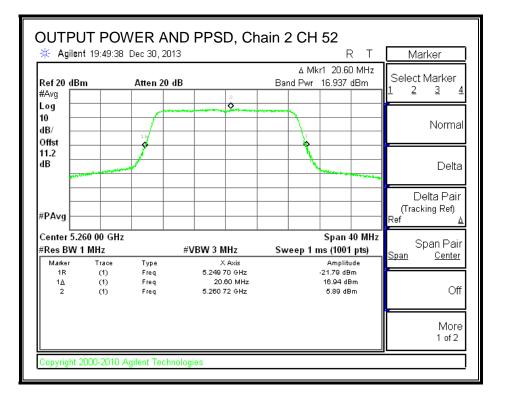


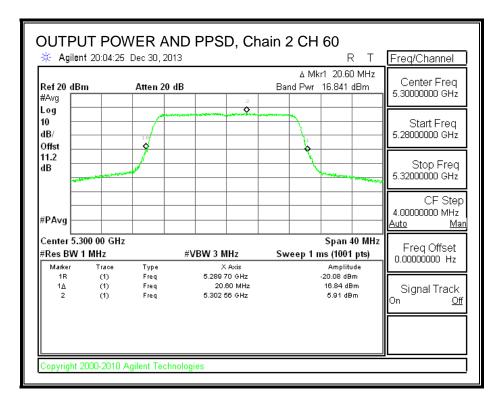
Page 214 of 845





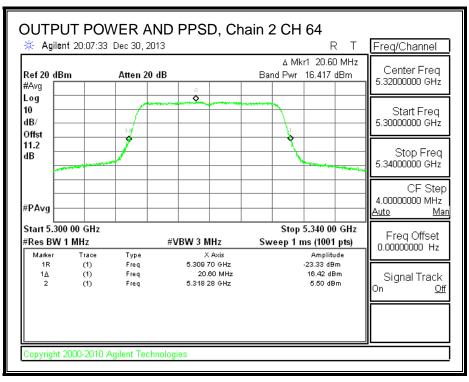
Page 215 of 845





Page 216 of 845

REPORT NO: 15U21905-E1V3 MODEL: ID:072



Page 217 of 845

9.15. 802.11n HT40 1TX SISO MODE IN THE 5.3 GHz BAND

26 dB BANDWIDTH 9.15.1.

LIMITS

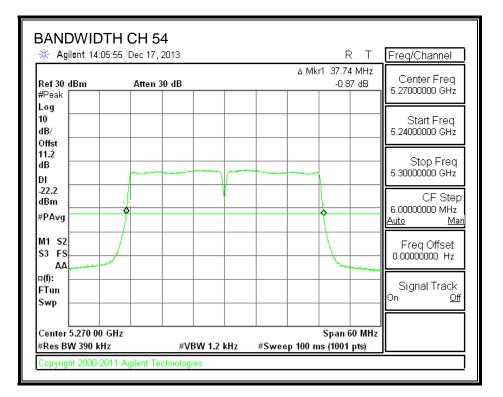
None; for reporting purposes only.

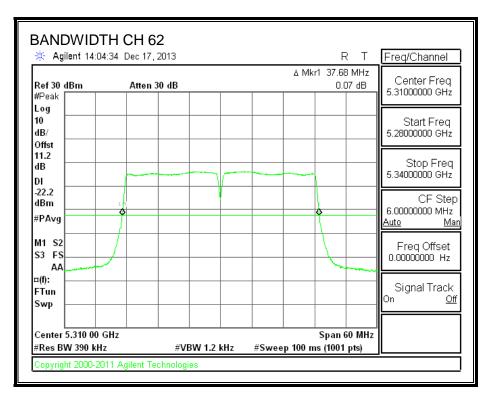
RESULTS

| Channel | Frequency | 26 dB Bandwidth | |
|---------|-----------|-----------------|--|
| (MHz) | | (MHz) | |
| 54 5270 | | 37.74 | |
| 62 5310 | | 37.68 | |

Page 218 of 845

26 dB BANDWIDTH





Page 219 of 845

REPORT NO: 15U21905-E1V3 MODEL: ID:072 9.15.2. 99% BANDWIDTH

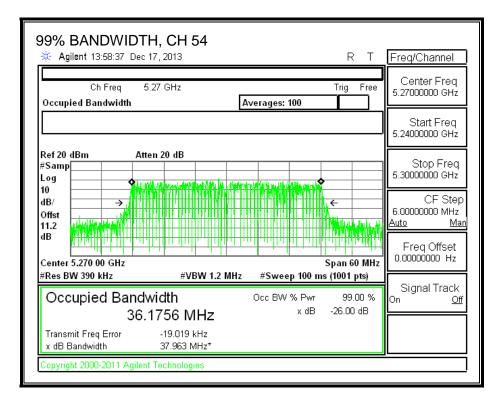
LIMITS

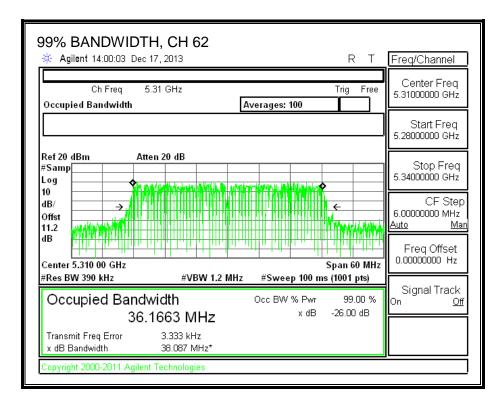
None; for reporting purposes only.

RESULTS

| Channel | Frequency | 99% Bandwidth |
|---------|-----------|---------------|
| | (MHz) | (MHz) |
| 54 5270 | | 36.1756 |
| 62 | 5310 | 36.1663 |

Page 220 of 845





Page 221 of 845

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 11.19 dB (including 10 dB pad and 1.19 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

Average Power Results

| Channel | Frequency | Chain 0 |
|---------|-----------|---------|
| | | Power |
| | (MHz) | (dBm) |
| 54 | 5270 | 17.50 |
| 62 | 5310 | 12.81 |

Page 222 of 845

REPORT NO: 15U21905-E1V3 MODEL: ID:072 9.15.4. OUTPUT POWER AND PPSD

<u>LIMITS</u>

FCC §15.407 (a) (2)

For the band 5.25–5.35 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 peak 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.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

| Antenna | |
|---------|--|
| Gain | |
| (dBi) | |
| 2.40 | |

Page 223 of 845

Bandwidth and Antenna Gain

| Channel | Frequency | Min | Min | Directional |
|---------|-----------|-------|------------|-------------|
| | | 26 dB | 99% | Gain |
| | | BW | BW | |
| | (MHz) | (MHz) | (MHz) | (dBi) |
| 54 | 5270 | 37.7 | 36.2 | 2.40 |
| 62 | 5310 | 37.7 | 36.2 | 2.40 |

Limits

| Channel | Frequency | FCC | IC | IC | Power | FCC | IC | PPSD |
|---------|-----------|-------|-------|-------|-------|-------|-------|-------|
| | | Power | Power | EIRP | Limit | PPSD | PSD | Limit |
| | | Limit | Limit | Limit | | Limit | Limit | |
| | (MHz) | (dBm) |
| 54 | 5270 | 24.00 | 24.00 | 30.00 | 24.00 | 11.00 | 11.00 | 11.00 |
| 62 | 5310 | 24.00 | 24.00 | 30.00 | 24.00 | 11.00 | 11.00 | 11.00 |

 Duty Cycle CF (dB)
 0.42
 Included in Calculations of Corr'd Power & PPSD

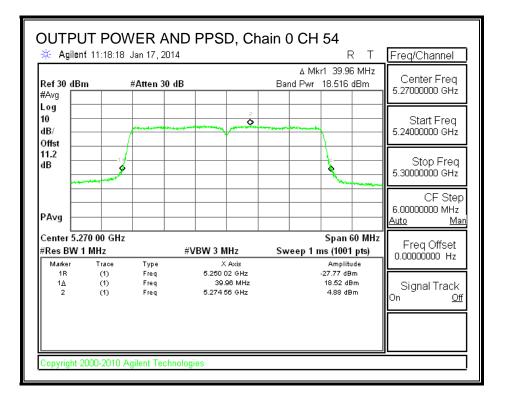
Output Power Results

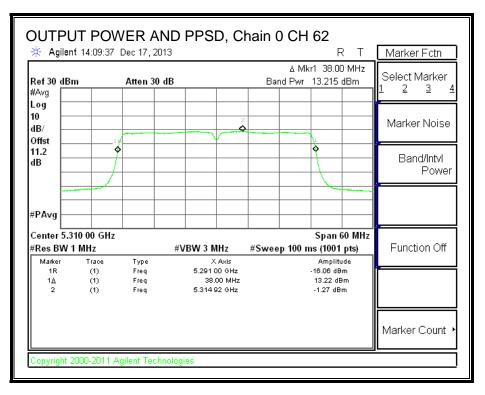
| Channel | Frequency | Chain 0 | Total | Power | Power |
|---------|---------------|----------------|-----------------------|----------------|---------------|
| | | Meas | Corr'd | Limit | Margin |
| | | Power | Power | | |
| | | | | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dB) |
| 54 | (MHz) 5270 | (dBm) 18.52 | (dBm) 18.94 | (dBm) 24.00 | (dB) -5.06 |

PPSD Results

| Channel | Frequency | Chain 0 | Total | PPSD | PPSD |
|---------|-----------|---------|--------|-------|--------|
| | | Meas | Corr'd | Limit | Margin |
| | | PPSD | PPSD | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dB) |
| | | | | | |
| 54 | 5270 | 4.88 | 5.30 | 11.00 | -5.70 |

* Note Channel 62 Peak power low due to BE results





Page 225 of 845

9.16. 802.11n HT40 3TX CDD MODE IN THE 5.3 GHz BAND

26 dB BANDWIDTH 9.16.1.

LIMITS

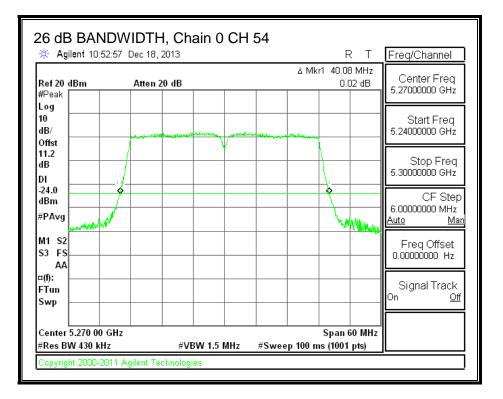
None; for reporting purposes only.

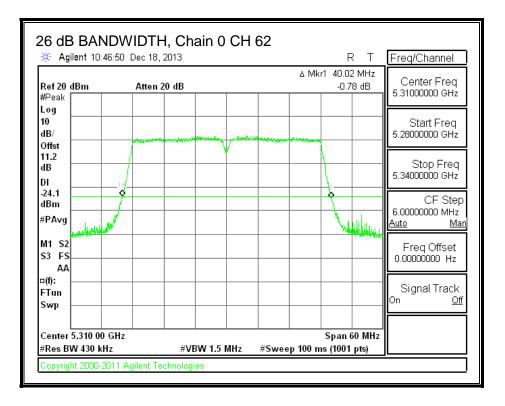
RESULTS

| Channel | Frequency | 26 dB BW | 26 dB BW | 26 dB BW |
|---------|-----------|----------|----------|----------|
| | | Chain 0 | Chain 1 | Chain 2 |
| | (MHz) | (MHz) | (MHz) | (MHz) |
| 54 | 5270 | 40.08 | 39.36 | 39.54 |
| 62 | 5310 | 40.02 | 39.36 | 39.42 |

Page 226 of 845

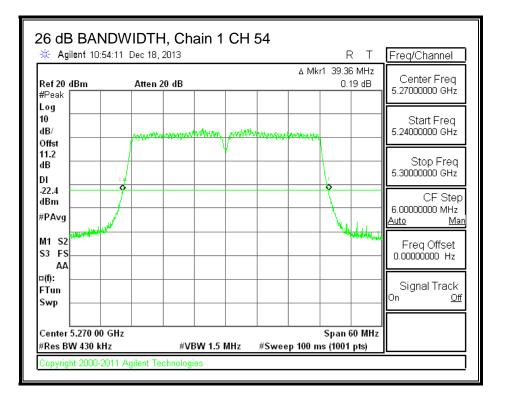
26 dB BANDWIDTH, Chain 0

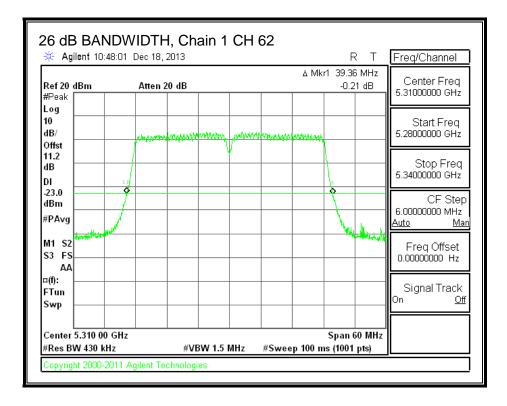




Page 227 of 845

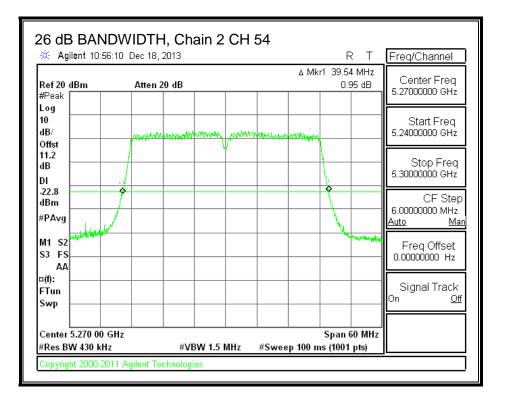
26 dB BANDWIDTH, Chain 1

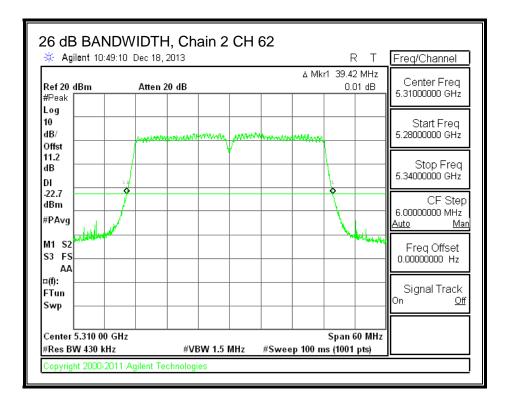




Page 228 of 845

26 dB BANDWIDTH, Chain 2





Page 229 of 845

LIMITS

None; for reporting purposes only.

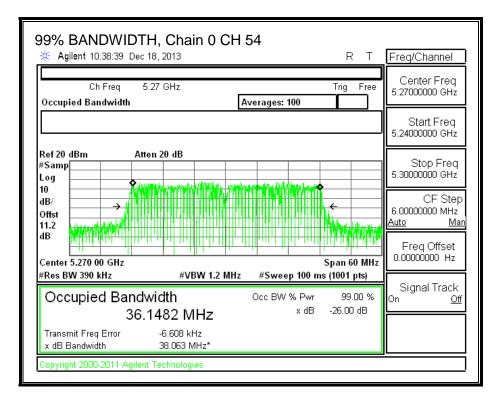
<u>RESULTS</u>

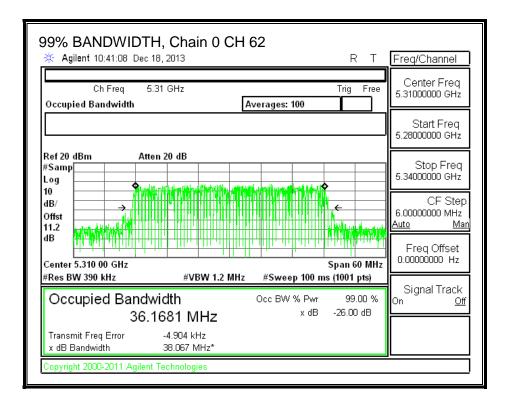
| Channel | Frequency | 99% BW | 99% BW | 99% BW |
|---------|-----------|---------|---------|---------|
| | | Chain 0 | Chain 1 | Chain 2 |
| | (MHz) | (MHz) | (MHz) | (MHz) |
| 54 | 5270 | 36.1482 | 36.1456 | 36.1351 |
| 62 | 5310 | 36.1681 | 36.1494 | 36.1480 |

Page 230 of 845

REPORT NO: 15U21905-E1V3 MODEL: ID:072 99% BANDWIDTH

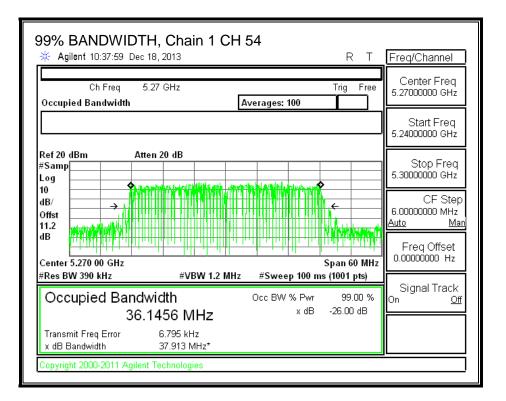
99% BANDWIDTH, Chain 0

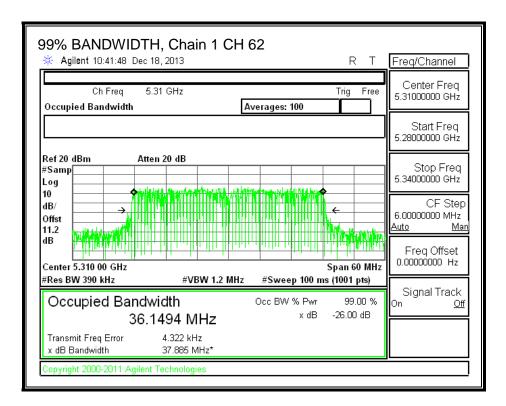




Page 231 of 845

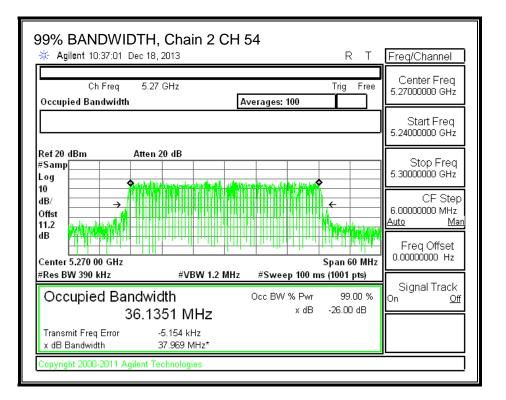
99% BANDWIDTH, Chain 1

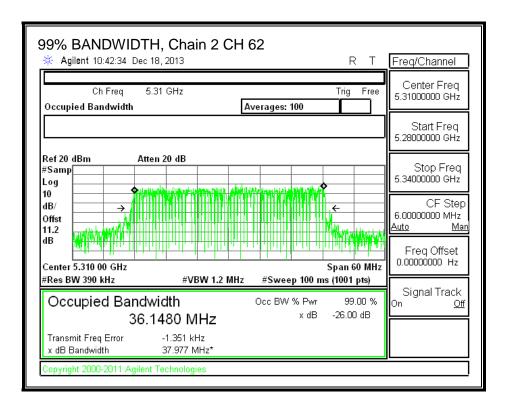




Page 232 of 845

99% BANDWIDTH, Chain 2





Page 233 of 845

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 11.19 dB (including 10 dB pad and 1.19 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

Average Power Results

| Channel | Frequency | Chain 0 | Chain 1 | Chain 2 | Total |
|---------|-----------|---------|---------|---------|-------|
| | | Power | Power | Power | Power |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) |
| 54 | 5270 | 12.61 | 12.90 | 13.11 | 17.65 |
| 62 | 5310 | 10.26 | 10.00 | 10.68 | 15.09 |

Page 234 of 845

<u>LIMITS</u>

FCC §15.407 (a) (2)

For the band 5.25–5.35 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 peak 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.

DIRECTIONAL ANTENNA GAIN

The TX chains are correlated and the antenna gain is the same for each chain. The directional gain is:

| Antenna | 10 * Log (3 chains) | Correlated Chains | |
|---------|---------------------|--------------------------|--|
| Gain | | Directional Gain | |
| (dBi) | (dB) | (dBi) | |
| 2.40 | 4.77 | 7.17 | |

Page 235 of 845

Bandwidth and Antenna Gain

| Channel | Frequency | Min | Min | Directional | Directional |
|---------|-----------|-------|---------|-------------|-------------|
| | | 26 dB | 99% | Gain | Gain |
| | | BW | BW | for Power | for PPSD |
| | (MHz) | (MHz) | (MHz) | (dBi) | (dBi) |
| 54 | 5270 | 39.36 | 36.1351 | 2.40 | 7.17 |
| 62 | 5310 | 39.42 | 36.1480 | 2.40 | 7.17 |

Limits

| Channel | Frequency | FCC | IC | IC | Power | FCC | IC | PPSD |
|---------|-----------|-------|-------|-------|-------|-------|-------|-------|
| | | Power | Power | EIRP | Limit | PPSD | PSD | Limit |
| | | Limit | Limit | Limit | | Limit | Limit | |
| | (MHz) | (dBm) |
| 54 | 5270 | 24.00 | 24.00 | 30.00 | 24.00 | 9.83 | 11.00 | 9.83 |
| 62 | 5310 | 24.00 | 24.00 | 30.00 | 24.00 | 9.83 | 11.00 | 9.83 |

Duty Cycle CF (dB) 0.14 Included in Calculations of Corr'd Power & PPSD

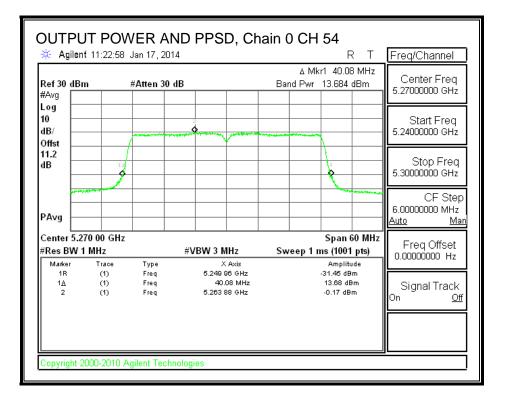
Output Power Results

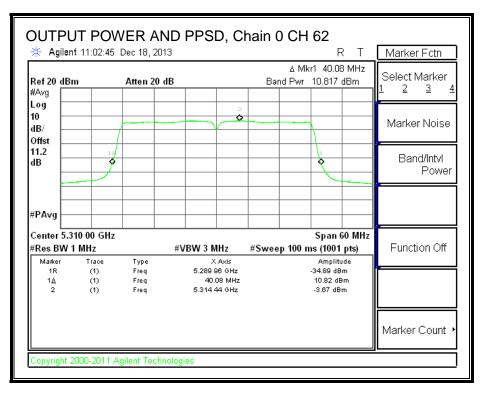
| Channel | Frequency | Chain 0 | Chain 1 | Chain 2 | Total | Power | Power |
|---------|--------------------|------------------------|------------------------|----------------|----------------|-------------------------|------------------------|
| | | Meas | Meas | Meas | Corr'd | Limit | Margin |
| | | Power | Power | Power | Power | | |
| | <i>(</i>) | | | | | | (15) |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dBm) | (dB) |
| 54 | (MHz) 5270 | (dBm) 13.68 | (dBm) 13.65 | (dBm) 14.09 | (dBm) 18.72 | (dBm) 24.00 | (dB) -5.28 |

PPSD Results

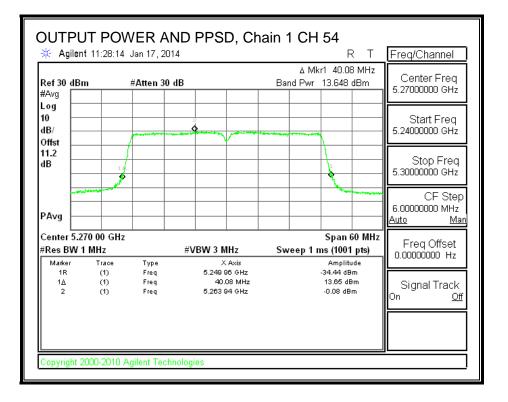
| Channel | Frequency | Chain 0 | Chain 1 | Chain 2 | Total | PPSD | PPSD |
|---------|-----------|---------|---------|---------|--------|-------|--------|
| | | Meas | Meas | Meas | Corr'd | Limit | Margin |
| | | PPSD | PPSD | PPSD | PPSD | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dBm) | (dB) |
| 54 | 5270 | -0.17 | -0.08 | 0.53 | 5.02 | 9.83 | -4.81 |
| 62 | 5310 | -3.67 | -3.63 | -3.07 | 1.46 | 9.83 | -8.37 |

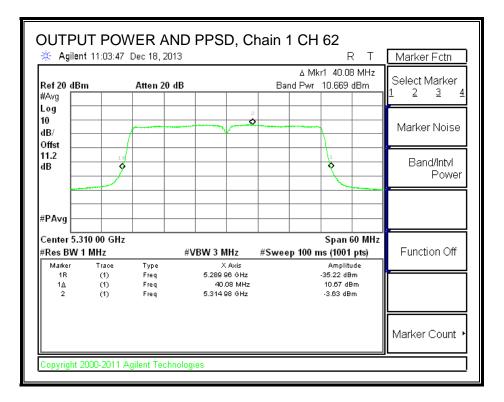
Page 236 of 845



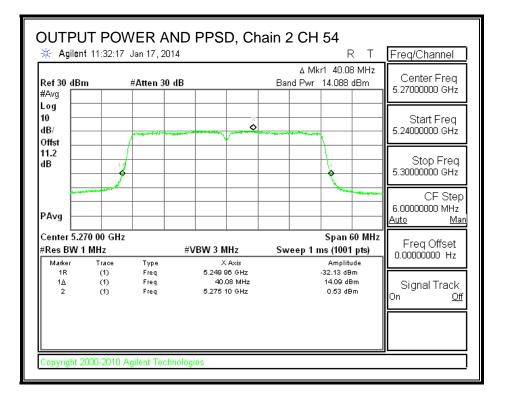


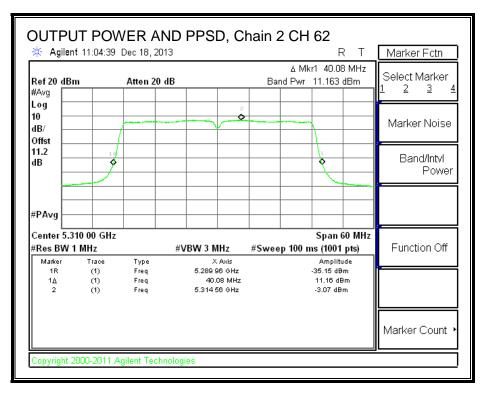
Page 237 of 845





Page 238 of 845





Page 239 of 845

9.17. 802.11n HT40 3TX SDM MODE IN THE 5.3 GHz BAND

9.17.1. 26 dB BANDWIDTH

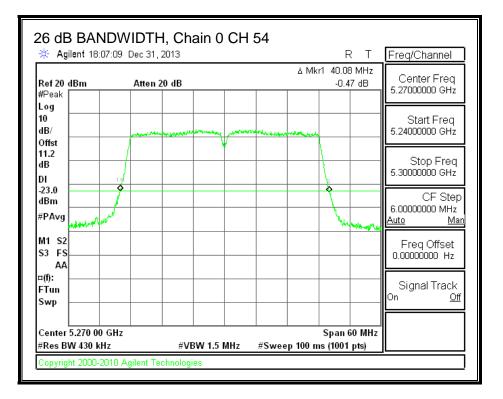
LIMITS

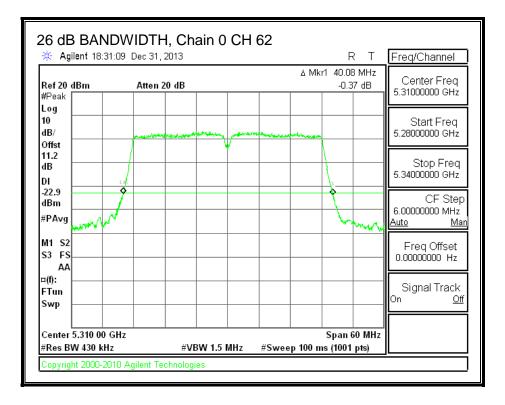
None; for reporting purposes only.

<u>RESULTS</u>

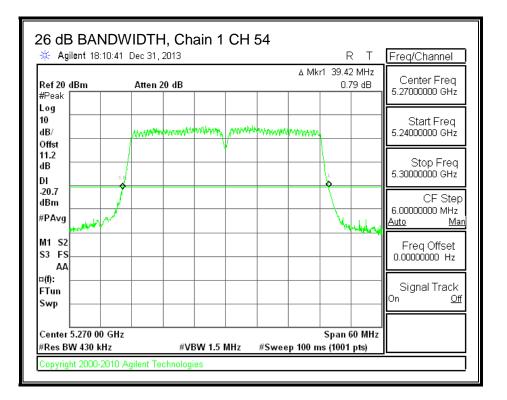
| Channel | Frequency | 26 dB BW | 26 dB BW | 26 dB BW |
|---------|-----------|----------|----------|----------|
| | | Chain 0 | Chain 1 | Chain 2 |
| | (MHz) | (MHz) | (MHz) | (MHz) |
| 54 | 5270 | 40.08 | 39.42 | 39.60 |
| 62 | 5310 | 40.08 | 39.36 | 39.52 |

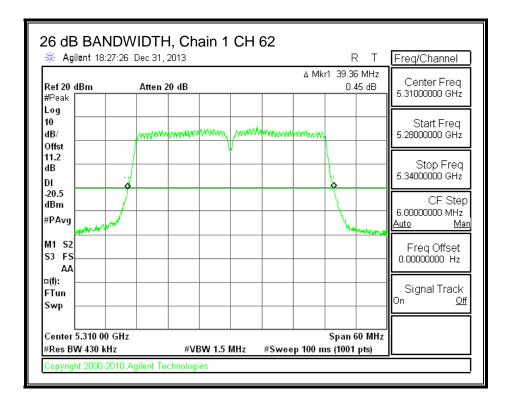
Page 240 of 845



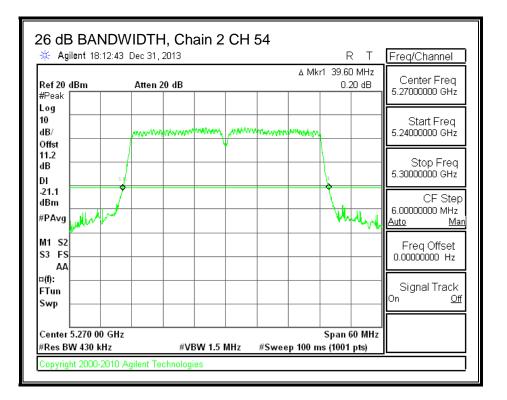


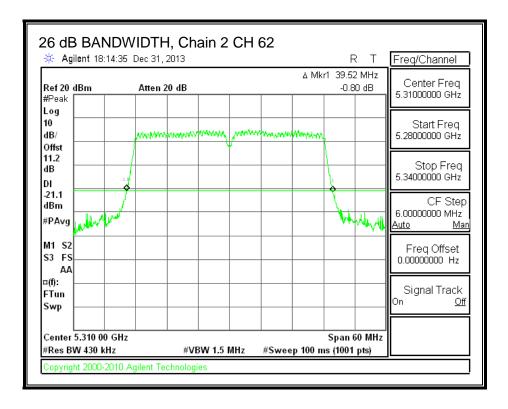
Page 241 of 845





Page 242 of 845





Page 243 of 845

REPORT NO: 15U21905-E1V3 MODEL: ID:072 9.17.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

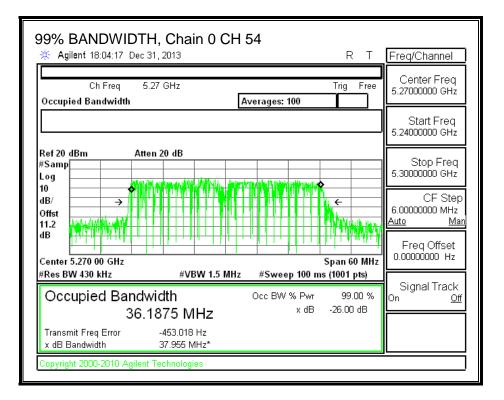
<u>RESULTS</u>

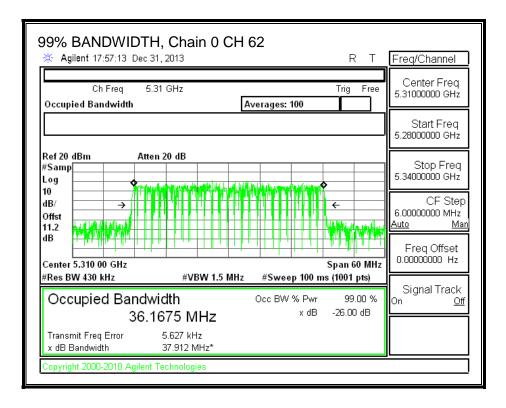
| Channel | Frequency | 99% BW | 99% BW | 99% BW |
|---------|-----------|---------|---------|---------|
| | | Chain 0 | Chain 1 | Chain 2 |
| | (MHz) | (MHz) | (MHz) | (MHz) |
| 54 | 5270 | 36.1875 | 36.1717 | 36.1561 |
| 62 | 5310 | 36.1675 | 36.1642 | 36.1619 |

Page 244 of 845

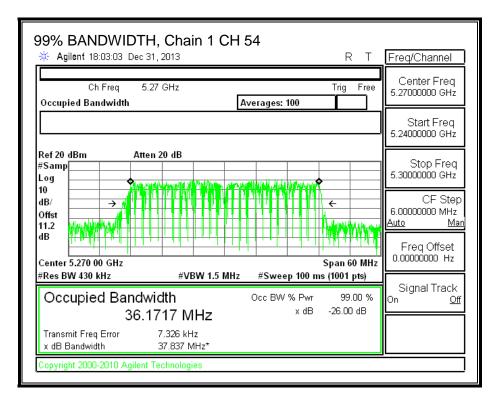
REPORT NO: 15U21905-E1V3 MODEL: ID:072 99% BANDWIDTH

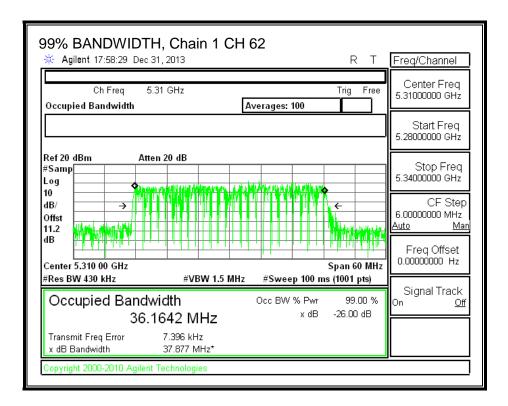
99% BANDWIDTH, Chain 0



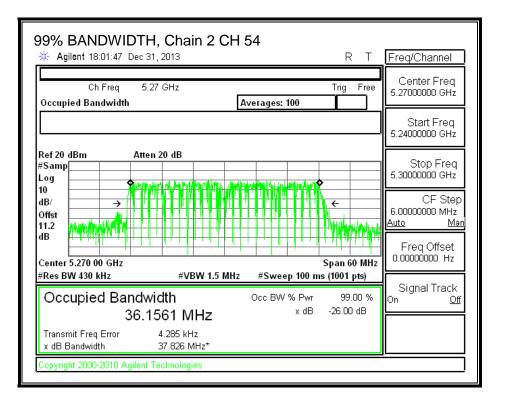


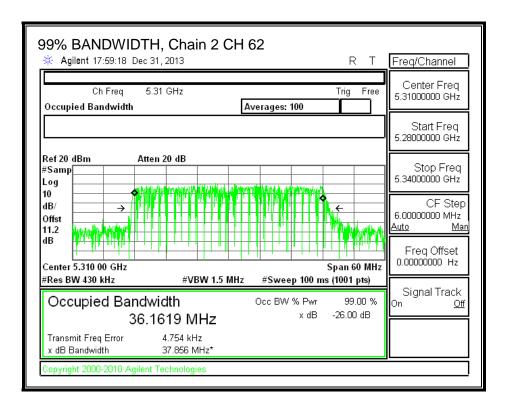
Page 245 of 845





Page 246 of 845





Page 247 of 845

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 11.19 dB (including 10 dB pad and 1.19 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

Average Power Results

| Channel | Frequency | Chain 0 | Chain 1 | Chain 2 | Total |
|---------|-----------|---------|---------|---------|-------|
| | | Power | Power | Power | Power |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) |
| 54 | 5270 | 15.82 | 15.84 | 16.10 | 20.69 |
| 62 | 5310 | 12.01 | 12.13 | 12.34 | 16.93 |

REPORT NO: 15U21905-E1V3 MODEL: ID:072 9.17.4. OUTPUT POWER AND PPSD

<u>LIMITS</u>

FCC §15.407 (a) (2)

For the band 5.25–5.35 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 peak 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.

DIRECTIONAL ANTENNA GAIN

The TX chains are uncorrelated and the antenna gain is the same for each chain. The directional gain is equal to the antenna gain.

| Antenna |
|---------|
| Gain |
| (dBi) |
| 2.40 |

Bandwidth and Antenna Gain

| Channel | Frequency | Min | Min | Directional | Directional | |
|---------|-----------|-------|---------|-------------|-------------|--|
| | | 26 dB | 99% | Gain | Gain | |
| | | BW | BW | for Power | for PPSD | |
| | (MHz) | (MHz) | (MHz) | (dBi) | (dBi) | |
| 54 | 5270 | 39.42 | 36.1561 | 2.40 | 2.40 | |
| 62 | 5310 | 39.36 | 36.1619 | 2.40 | 2.40 | |

Limits

| Channel | Frequency | FCC | IC | IC | Power | FCC | IC | PPSD |
|---------|-----------|-------|-------|-------|-------|-------|-------|-------|
| | | Power | Power | EIRP | Limit | PPSD | PSD | Limit |
| | | Limit | Limit | Limit | | Limit | Limit | |
| | (MHz) | (dBm) |
| 54 | 5270 | 24.00 | 24.00 | 30.00 | 24.00 | 11.00 | 11.00 | 11.00 |
| 62 | 5310 | 24.00 | 24.00 | 30.00 | 24.00 | 11.00 | 11.00 | 11.00 |

Duty Cycle CF (dB) 0.34 Included in Calculations of Corr'd Power & PPSD

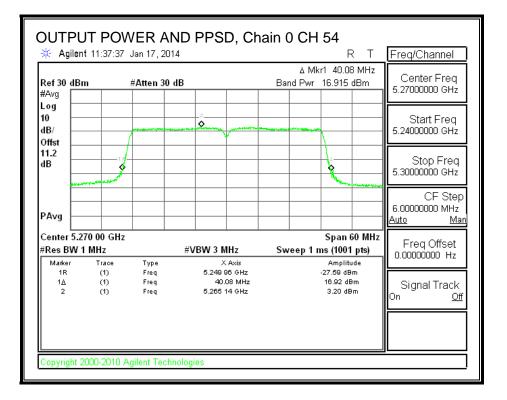
Output Power Results

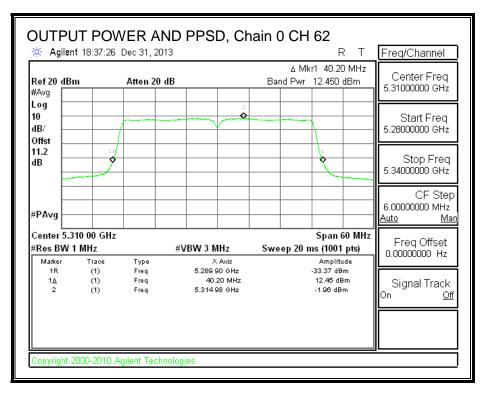
| Channel | Frequency | Chain 0 | Chain 1 | Chain 2 | Total | Power | Power |
|---------|-----------|---------|---------|---------|--------|-------|--------|
| | | Meas | Meas | Meas | Corr'd | Limit | Margin |
| | | Power | Power | Power | Power | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dBm) | (dB) |
| 54 | 5270 | 16.92 | 16.85 | 17.25 | 22.12 | 24.00 | -1.88 |
| 62 | 5310 | 12.45 | 12.66 | 13.19 | 17.89 | 24.00 | -6.11 |

PPSD Results

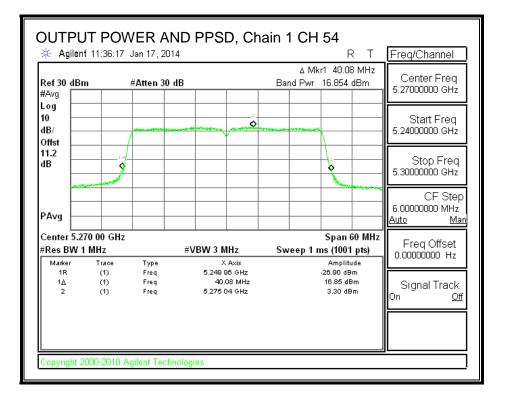
| Channel | Frequency | Chain 0 | Chain 1 | Chain 2 | Total | PPSD | PPSD |
|---------|-----------|---------|---------|---------|--------|-------|--------|
| | | Meas | Meas | Meas | Corr'd | Limit | Margin |
| | | PPSD | PPSD | PPSD | PPSD | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dBm) | (dB) |
| 54 | 5270 | 3.20 | 3.30 | 3.73 | 8.53 | 11.00 | -2.47 |
| 62 | 5310 | -1.96 | -1.69 | -1.24 | 3.49 | 11.00 | -7.51 |

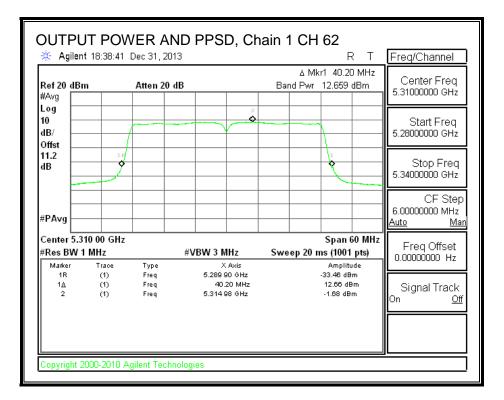
Page 250 of 845



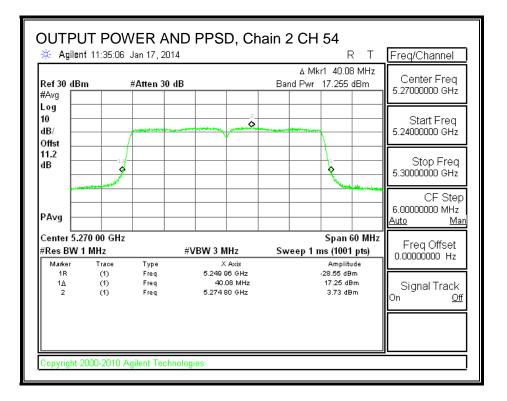


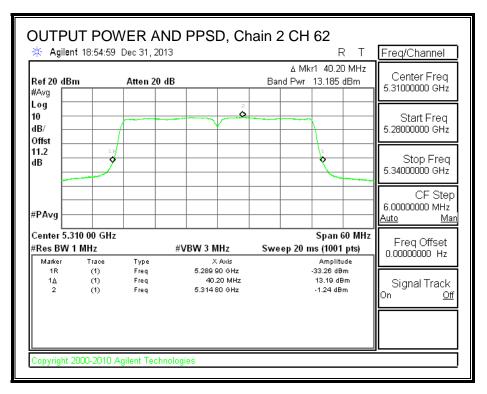
Page 251 of 845





Page 252 of 845





Page 253 of 845

9.18. 802.11ac 80MHz 1TX SISO MODE IN THE 5.3 GHz BAND

9.18.1. 26 dB BANDWIDTH

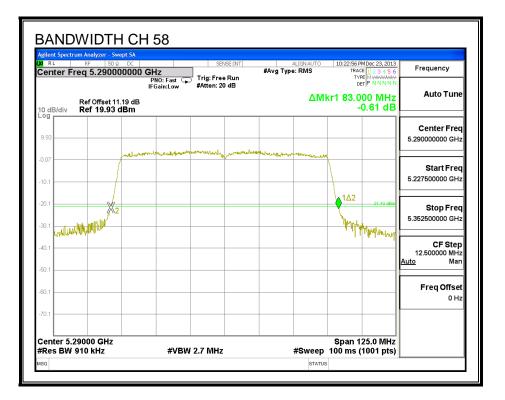
<u>LIMITS</u>

None; for reporting purposes only.

<u>RESULTS</u>

| Channel | Frequency | 26 dB Bandwidth |
|---------|-----------|-----------------|
| | (MHz) | (MHz) |
| 58 | 5290 | 83.00 |

Page 254 of 845



Page 255 of 845

REPORT NO: 15U21905-E1V3 MODEL: ID:072 9.18.2. 99% BANDWIDTH

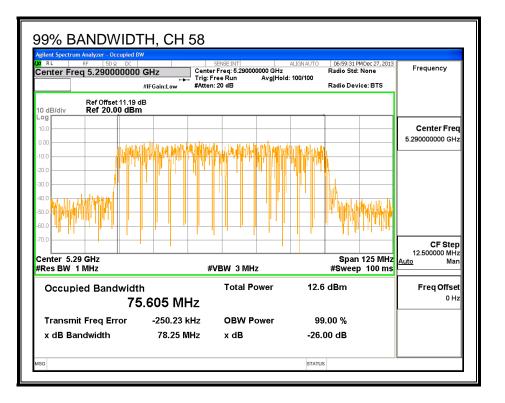
LIMITS

None; for reporting purposes only.

RESULTS

| Channel | Frequency | 99% Bandwidth |
|---------|-----------|---------------|
| | (MHz) | (MHz) |
| 58 | 5210 | 75.605 |

Page 256 of 845



Page 257 of 845

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 11.26 dB (including 10 dB pad and 1.26 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

| Channel | Frequency | Power |
|---------|-----------|-------|
| | (MHz) | (dBm) |
| 58 | 5290 | 13.18 |

Page 258 of 845

<u>LIMITS</u>

FCC §15.407 (a) (2)

For the band 5.25–5.35 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 peak 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.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

Page 259 of 845

Bandwidth and Antenna Gain

| Channel | Frequency | Min | Min | Directional |
|---------|-----------|-------|------------|-------------|
| | | 26 dB | 99% | Gain |
| | | BW | BW | |
| | (MHz) | (MHz) | (MHz) | (dBi) |
| 58 | 5290 | 83.0 | 75.5 | 2.40 |

Limits

| Channel | Frequency | FCC | IC | Max | Power | FCC | IC | PPSD |
|---------|-----------|-------|-------|-------|-------|-------|-------|-------|
| | | Power | EIRP | IC | Limit | PPSD | eirp | Limit |
| | | Limit | Limit | Power | | Limit | PSD | |
| | | | | | | | Limit | |
| | (MHz) | (dBm) |
| 58 | 5290 | 24.00 | 24.00 | 30.00 | 24.00 | 11.00 | 11.00 | 11.00 |

Duty Cycle CF (dB) 0.27 Included in Calculations of Corr'd Power & PPSD

Output Power Results

| Channel | Frequency | Chain 0 | Total | Power | Power |
|---------|-----------|---------|--------|-------|--------|
| | | Meas | Corr'd | Limit | Margin |
| | | Power | Power | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dB) |
| 58 | 5290 | 13.22 | 13.49 | 24.00 | -10.51 |

PPSD Results

| Channel | Frequency | Chain 0 | Total | PPSD | PPSD |
|---------|-----------|---------|--------|-------|--------|
| | | Meas | Corr'd | Limit | Margin |
| | | PPSD | PPSD | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dB) |
| 58 | 5290 | -3.97 | -3.70 | 11.00 | -14.70 |

Page 260 of 845

| RL | trum Analyz RF Freq 5.2 | 50 Ω | 0000 G | i Hz PNO: Fast ← FGain:Low | | | Avg | ALIGNAUTO Fype: RMS | 06:36 | 38 PMDec 27, 2013 TRACE 1 2 3 4 5 6 TYPE A WAWAWA DET A N N N N N | Frequency |
|------------------------------------|-------------------------------|------|---------|---|----------------------|----------------|---------------------|-----------------------------|--------|--|-------------------------------|
|) dB/div | Ref Off Ref 20 | | 19 dB | FGain:Low | WALCON. | | | | | 0 000 GHz 3.218 dBm | Auto Tune |
| | 1101 21 | | | | | T | | | | | |
| 1.00 | | | | ~ | \Diamond^1 | ¢ ² | - | | | | Center Freq 5.29000000 GHz |
| 0.0 | | - 1 | | | | ¥— | | | 1 | | |
| 0.0 | | 1 | | | | | | | l | | Start Fred 5.227500000 GHz |
| 0.0 | | / | | | | | | | - have | | C.LLI COCCO CITA |
| 0.0 | | | | | | | | | | | Stop Freq |
| 0.0 | | | | | | | | | | | 5.352500000 GHz |
| | 6.29000 G V 1.0 MH | | | #VB | W 3.0 MH | z | | Sweep | | n 125.0 MHz is (1001 pts) | CF Step 12.500000 MHz |
| KRIMODE 1 N <mark>2</mark> N | TRC SCL 1 f 1 f | | | 25 GHz 00 GHz | -3.968 c -9.998 c | lBm | UNCTION nd Power | FUNCTION WIDTH 83.00 MHz | FUN | 13.218 dBm | <u>Auto</u> Man |
| 3 4 5 | | | 5.290 0 | | -9.996 (| BIII Da | iu Fowei | 65.00 MHZ | | 13.216 dBm | Freq Offset 0 Hz |
| 6 7 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 1 | | | | | | | | | | | |

Page 261 of 845

9.19. 802.11ac 80MHz 3TX CDD MODE IN THE 5.3 GHz BAND

9.19.1. 26 dB BANDWIDTH

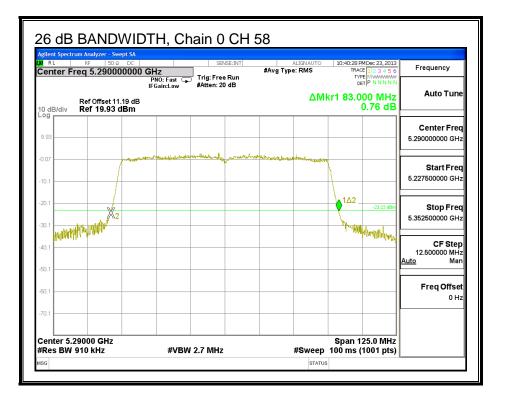
<u>LIMITS</u>

None; for reporting purposes only.

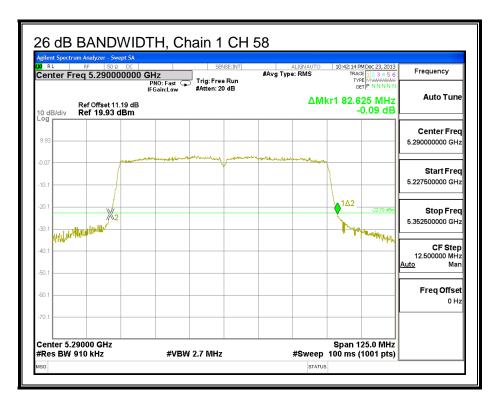
RESULTS

| Channel | Frequency | 26 dB BW | 26 dB BW | 26 dB BW |
|---------|-----------|----------|----------|----------|
| | | Chain 0 | Chain 1 | Chain 2 |
| | (MHz) | (MHz) | (MHz) | (MHz) |
| 58 | 5290 | 83.00 | 82.63 | 82.38 |

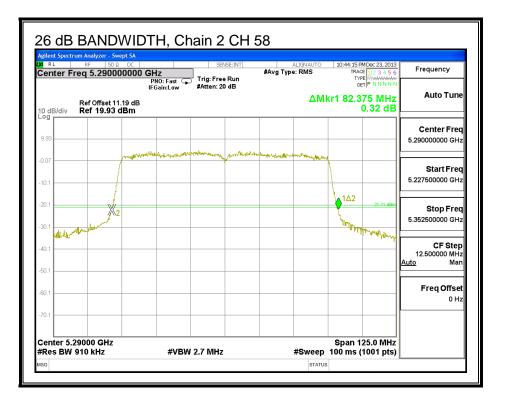
Page 262 of 845



26 dB BANDWIDTH, Chain 1



Page 263 of 845



Page 264 of 845

REPORT NO: 15U21905-E1V3 MODEL: ID:072 9.19.2. 99% BANDWIDTH

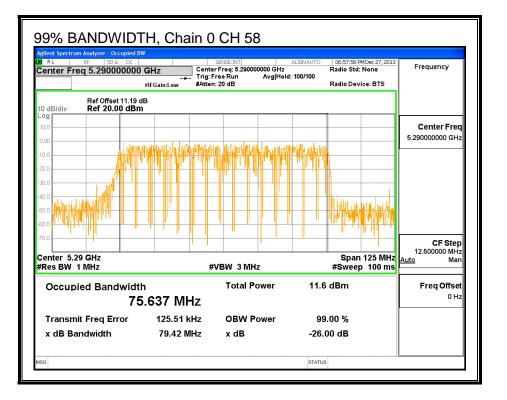
LIMITS

None; for reporting purposes only.

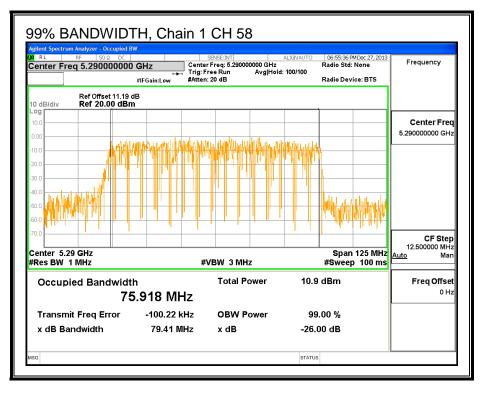
<u>RESULTS</u>

| Channel | Frequency | 99% BW | 99% BW | 99% BW |
|---------|-----------|---------|---------|---------|
| | | Chain 0 | Chain 1 | Chain 2 |
| | (MHz) | (MHz) | (MHz) | (MHz) |
| 58 | 5290 | 75.637 | 75.918 | 75.549 |

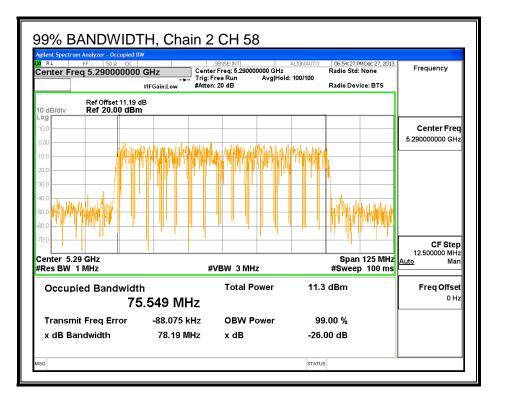
Page 265 of 845



99% BANDWIDTH, Chain 1



Page 266 of 845



Page 267 of 845

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 11.26 dB (including 10 dB pad and 1.26 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

Average Power Results

| Channel | Frequency | Chain 0 | Chain 1 | Chain 2 | Total |
|---------|-----------|---------|---------|---------|-------|
| | | Power | Power | Power | Power |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) |
| 58 | 5290 | 9.89 | 10.22 | 10.81 | 15.09 |

Page 268 of 845

<u>LIMITS</u>

FCC §15.407 (a) (2)

For the band 5.25–5.35 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 peak 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.

DIRECTIONAL ANTENNA GAIN

The TX chains are correlated and the antenna gain is the same for each chain. The directional gain is:

| Antenna | 10 * Log (3 chains) | Correlated Chains |
|---------|---------------------|--------------------------|
| Gain | | Directional Gain |
| (dBi) | (dB) | (dBi) |
| 2.40 | 4.77 | 7.17 |

Page 269 of 845

Bandwidth and Antenna Gain

| Channel | Frequency | Min | Min | Directional | Directional |
|---------|-----------|-------|---------|-------------|-------------|
| | | 26 dB | 99% | Gain | Gain |
| | | BW | BW | for Power | for PPSD |
| | | | | | |
| | (MHz) | (MHz) | (MHz) | (dBi) | (dBi) |
| 58 | 5290 | 82.56 | 75.5680 | 2.25 | 7.02 |

Limits

| Channel | Frequency | FCC | IC | Max | Power | FCC | IC | PPSD |
|---------|-----------|-------|-------|-------|-------|-------|-------|-------|
| | | Power | EIRP | IC | Limit | PPSD | eirp | Limit |
| | | Limit | Limit | Power | | Limit | PSD | |
| | | | | | | | Limit | |
| | (MHz) | (dBm) |
| 58 | 5290 | 24.00 | 24.00 | 30.00 | 24.00 | 9.98 | 11.00 | 9.98 |

Duty Cycle CF (dB) 0.26 Included in Calculations of Corr'd Power & PPSD

Output Power Results

| Channel | Frequency | Chain 0 | Chain 1 | Chain 2 | Total | Power | Power |
|---------|-----------|---------|---------|---------|--------|-------|--------|
| | | Meas | Meas | Meas | Corr'd | Limit | Margin |
| | | Power | Power | Power | Power | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dBm) | (dB) |
| 58 | 5290 | 10.13 | 10.24 | 11.18 | 15.58 | 24.00 | -8.42 |

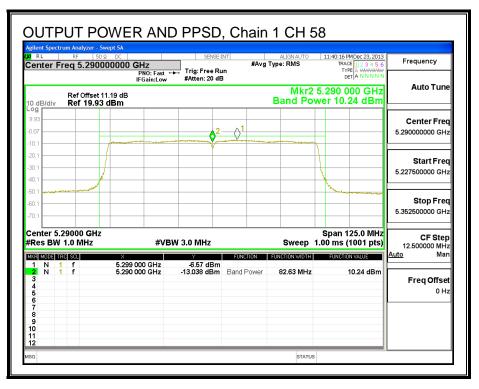
PPSD Results

| Channel | Frequency | Chain 0 | Chain 1 | Chain 2 | Total | PPSD | PPSD |
|---------|-----------|---------|---------|---------|--------|-------|--------|
| | | Meas | Meas | Meas | Corr'd | Limit | Margin |
| | | PPSD | PPSD | PPSD | PPSD | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dBm) | (dB) |
| 58 | 5290 | -7.05 | -6.57 | -6.05 | -1.51 | 9.98 | -11.49 |

Page 270 of 845

| enter Fr | req 5.290 | 50 Ω DX D0000 | | st 🛶 Trig:Fr | | #Avg | ALIGNAUTO Type: RMS | | 01 PM Dec 23, 2013 TRACE 1 2 3 4 5 6 TYPE A WANNAME DET A N N N N N | Frequency |
|--|------------------------|------------------|----------------------------|--------------|----------------|----------|------------------------|--------|--|---------------------------------------|
|) dB/div | Ref Offsel Ref 19.9 | | dB | w written | | | | |) 000 GHz 0.13 dBm | Auto Tune |
| 29 .93 .07 | | | | | ¢ ² | | | | | Center Freq 5.290000000 GHz |
| 0.1 0.1 0.1 | | \int | | | | | | | | Start Freq 5.227500000 GHz |
| 0.1 0.1 0.1 | | | | | | | | | | Stop Freq 5.352500000 GHz |
| enter 5.2 Res BW | | | # | VBW 3.0 MH | | TINCTICN | Sweep | 1.00 m | n 125.0 MHz s (1001 pts) elonvalue | CF Step 12.500000 MHz Auto Mar |
| 1 N 1 2 N 1 3 4 5 6 6 7 7 8 9 9 | f | 5 | 282 500 GHz 290 000 GHz | -7.05 c | iBm | nd Power | 83.00 MHz | | 10.13 dBm | Freq Offset |

OUTPUT POWER AND PPSD, Chain 1



Page 271 of 845

| enter F | req 5.2 | 50 Ω 9000 | 0000 G | Hz PNO: Fast ↔ Gain:Low | | | #Avg | ALIGN AUTO Type: RMS | 11 | TRAC | MDec 23, 2013 E 1 2 3 4 5 6 E A MAMMM T A N N N N N | Frequency |
|----------------|---------------------|--------------------|--------------|-------------------------------|--------------|----|---------|-------------------------|--------------|-------------|--|--------------------------|
|) dB/div | Ref Offs Ref 19 | | 19 dB | -Gain:Low | Whiten. 20 | 40 | | Mkr2 Band Pov | | | 00 GHz 84 dBm | Auto Tune |
| 9g | | | | | | | | | | | | Center Fred |
| .07 | | | | | \bigcirc^1 | 2 | | | | | | 5.29000000 GHz |
| 0.1 | | 1 | | Marine and a second second | | | | | | | | |
| 0.1 | | + | | | | | | | | | | Start Freq |
| 0.1 | | 1 | | | | | | | \mathbf{n} | | | 5.227500000 GHz |
| | | entre ^s | | | | | | | × | with a real | | |
| 0.1 | | | | | | | | | | | | Stop Freq |
| 0.1 | | | | | | | | | | | | 5.352500000 GHz |
| | .29000 G 1.0 MHz | | | #VB | W 3.0 MHz | | | Sweep | | | 25.0 MHz 1001 pts) | CF Step 12.500000 MHz |
| KR MODE 1 N | RC SCL | | × 5.284 2 | 50 GHz | -6.047 dE | | INCTION | FUNCTION WIDTH | | FUNCTIO | N VALUE | <u>Auto</u> Man |
| 2 N 3 | 1 f | | 5.290 0 | | -11.782 dE | | d Power | 82.38 MHz | | 1 | 1.184 dBm | Freg Offset |
| 4 5 | | | | | | | | | | | | 0 Hz |
| 6 7 | | | | | | | | | | | | |
| 8 9 | | | | | | | | | | | | |
| 0 | | | | | | | | | | | | |

Page 272 of 845

9.20. 802.11ac 80MHz 3TX SDM MODE IN THE 5.3 GHz BAND

9.20.1. 26 dB BANDWIDTH

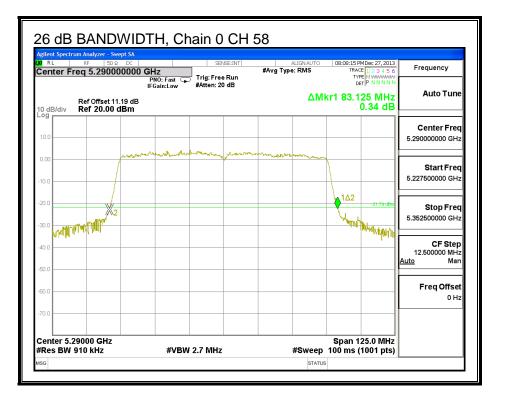
<u>LIMITS</u>

None; for reporting purposes only.

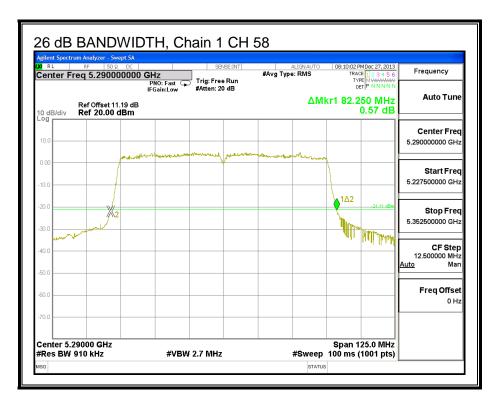
RESULTS

| Channel | Frequency | 26 dB BW | 26 dB BW | 26 dB BW |
|---------|-----------|----------|----------|----------|
| | | Chain 0 | Chain 1 | Chain 2 |
| | (MHz) | (MHz) | (MHz) | (MHz) |
| 58 | 5290 | 83.13 | 82.25 | 82.13 |

Page 273 of 845

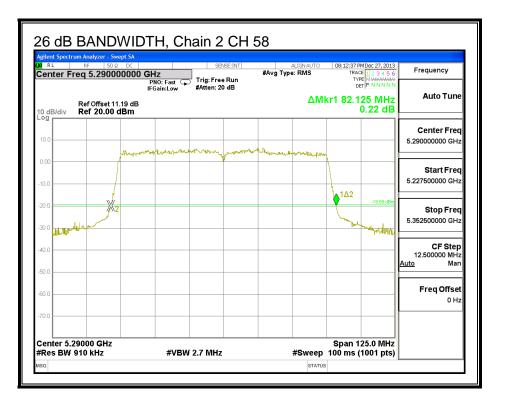


26 dB BANDWIDTH, Chain 1



Page 274 of 845

UL VERIFICATION SERVICES INC. 47173 BENICIA STREET, FREMONT, CA 94538, USA This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc. .



Page 275 of 845

LIMITS

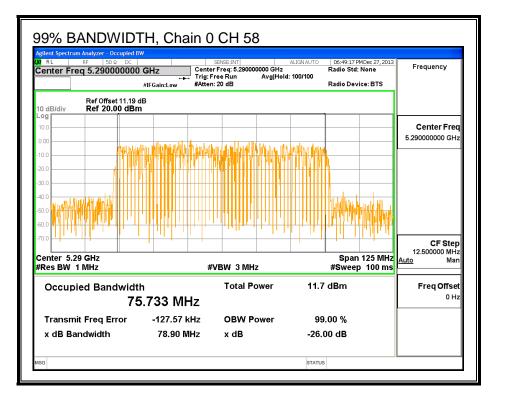
None; for reporting purposes only.

<u>RESULTS</u>

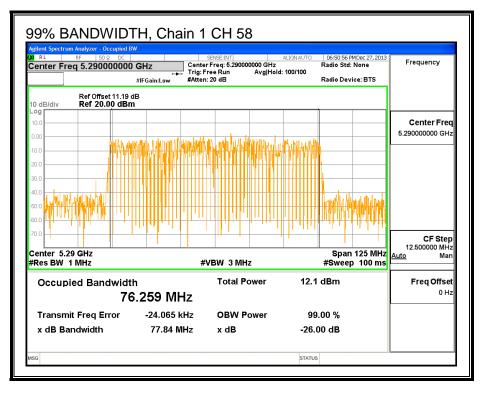
| Channel | Frequency | 99% BW | 99% BW | 99% BW | |
|---------|-----------|---------|---------|---------|--|
| | | Chain 0 | Chain 1 | Chain 2 | |
| | (MHz) | (MHz) | (MHz) | (MHz) | |
| 58 | 5290 | 75.7330 | 76.2590 | 74.5540 | |

Page 276 of 845

99% BANDWIDTH, Chain 0

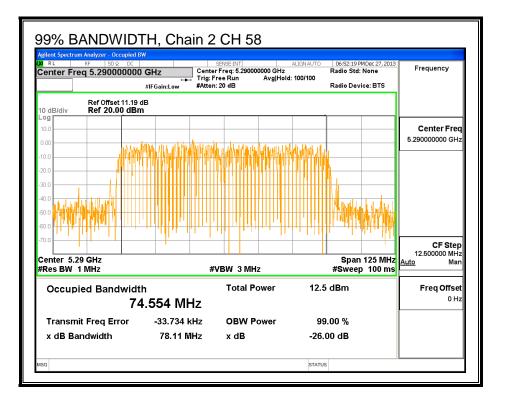


99% BANDWIDTH, Chain 1



Page 277 of 845

UL VERIFICATION SERVICES INC. 47173 BENICIA STREET, FREMONT, CA 94538, USA This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc. .



Page 278 of 845

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 11.26 dB (including 10 dB pad and 1.26 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

Average Power Results

| Channel | Frequency | Chain 0 | Chain 1 | Chain 2 | Total |
|---------|-----------|---------|---------|---------|-------|
| | | Power | Power | Power | Power |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) |
| 58 | 5290 | 11.27 | 10.91 | 11.61 | 16.04 |

Page 279 of 845

REPORT NO: 15U21905-E1V3 MODEL: ID:072 9.20.4. OUTPUT POWER AND PPSD

<u>LIMITS</u>

FCC §15.407 (a) (2)

For the band 5.25–5.35 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 peak 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.

DIRECTIONAL ANTENNA GAIN

The TX chains are uncorrelated and the antenna gain is the same for each chain. The directional gain is equal to the antenna gain.

| Antenna | |
|---------|--|
| Gain | |
| (dBi) | |
| 2.40 | |

Bandwidth and Antenna Gain

| Channel | Frequency | Min | Min | Directional | Directional |
|---------|-----------|-------|---------|-------------|-------------|
| | | 26 dB | 99% | Gain | Gain |
| | | BW | BW | for Power | for PPSD |
| | (MHz) | (MHz) | (MHz) | (dBi) | (dBi) |
| | . , | . , | . , | . , | . , |
| 58 | 5290 | 83.14 | 76.2590 | 2.40 | 2.40 |

Limits

| Channel | Frequency | FCC | IC | Max | Power | FCC | IC | PPSD |
|---------|-----------|-------|-------|-------|-------|-------|-------|-------|
| | | Power | EIRP | IC | Limit | PPSD | eirp | Limit |
| | | Limit | Limit | Power | | Limit | PSD | |
| | | | | | | | Limit | |
| | (MHz) | (dBm) |
| 58 | 5290 | 24.00 | 24.00 | 30.00 | 24.00 | 11.00 | 11.00 | 11.00 |

 Duty Cycle CF (dB)
 0.60
 Included in Calculations of Corr'd Power & PPSD

Output Power Results

| Channel | Frequency | Chain 0 | Chain 1 | Chain 2 | Total | Power | Power |
|---------|-----------|---------|---------|---------|--------|-------|--------|
| | | Meas | Meas | Meas | Corr'd | Limit | Margin |
| | | Power | Power | Power | Power | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dBm) | (dB) |
| 58 | 5290 | 11.06 | 11.36 | 11.97 | 16.85 | 24.00 | -7.15 |

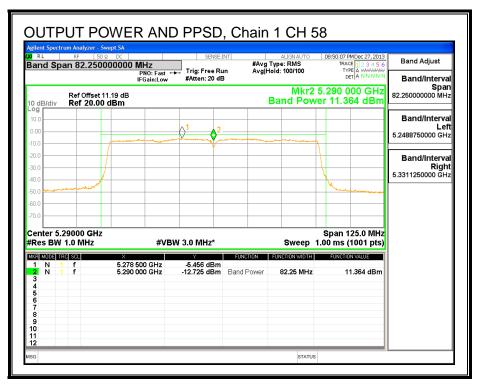
PPSD Results

| Channel | Frequency | Chain 0 | Chain 1 | Chain 2 | Total | PPSD | PPSD |
|---------|-----------|---------|---------|---------|--------|-------|--------|
| | | Meas | Meas | Meas | Corr'd | Limit | Margin |
| | | PPSD | PPSD | PPSD | PPSD | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dBm) | (dB) |
| 58 | 5290 | -5.86 | -5.46 | -5.05 | -0.07 | 11.00 | -11.07 |

Page 281 of 845

| Frequency | 1:47 PMDec 27, 2013 TRACE 1 2 3 4 5 6 | 08:5 | ALIGNAUTO pe: RMS | #Ava | E:INT | SE | | DC 000 GH2 | 50 Ω ΛΛΛΛ | | RF | | R |
|---------------------------|--|------|----------------------|----------|-------|-------------------------|--|-----------------|------------------|--------|---------|-------|------------|
| | DET A NNNN | | 1: 100/100 | | | Trig: Free #Atten: 2 | :Fast ↔ n:Low | PN | 0000 | 5.29 | Teq | lei | en |
| Auto Tune | 00 000 GHz 1.063 dBm | | | | | | | | et 11.1 00 di | | | 3/div | l dl |
| Center Frea | | | | | | | | | | | | |)g).0 |
| 5.290000000 GHz | | | | | 2_ |) <mark>1</mark> | | | | | | | .00 |
| | | | - Magandhanna | | | harmon | and the second | | 1 | | | | 0.0 |
| Start Freq | | | | | | | | | | | | | 1.0 |
| 5.227500000 GHz | | 1 | | | | | | | 1 | | | | 1.0 1 N |
| | mmmmm | ×, | | | | | | | 1 | مىرىيە | · | · | 1.0 |
| Stop Freq | | | | | | | | | | | | | 0.0 |
| 5.352500000 GHz | | | | | | | | | | | | | 0.0 |
| CF Step | an 125.0 MHz | | - | | | | | | łz | | .2900 | | |
| 12.500000 MHz Auto Man | ms (1001 pts) | | Sweep | | | 3.0 MHz | #VBV | | | | / 1.0 | | |
| | INCTION VALUE | FU | | | | -5.864 dE | | 5.278 250 | | | TRC SCI | Ν | 1 |
| Freq Offset | 11.063 dBm | | 83.13 MHz | nd Power | m t | -12.698 dE | HZ | 5.290 000 | | | 1 f | N | 2 |
| 0 Hz | | | | | | | | | | | | | 5 |
| | | | | | | | | | | | | | 5 |
| | | | | | | | | | | | | | 3 |
| | | | | | | | | | | | | |) |

OUTPUT POWER AND PPSD, Chain 1



Page 282 of 845

| en | | req | 5.290 | οΩ)00 | | | Fast + | | SENSE g: Free F ten: 20 c | Run | | ALIO Type: F lold: 10 | | 0 | TRA T) | PMDec 27, CE 1 2 3 PE A WWW DET A NN | 456 | Frequency |
|--------------|--------|------------|-------------------|-----------|---|--------------------|--------|-------|---------------------------------|------|-------|-----------------------------|---------------|---|-----------|---|------|-------------------------|
|) dF | 3/div | | f Offse f 20.0 | | | IFGain | LUW | irou | .en. 20 (| | | | Mkr2 I Pow | | | | | Auto Tun |
| g | | | . 2010 | | | | | | | | | | | | | | | |
| 0.0 | | | | | | | | | | o ∧1 | | | | | | | | Center Fre |
| 0.0 | | | | | | mon | | | ~~ | | | m | | | | | | 5.290000000 GH |
| | | | | 1 | | | | | Y | | | | | N | | | | |
| 0.0 | | | | 1 | | | | | | | | | | | | | | Start Fre |
| 0.0 1 N C | | | | | | | | | | | | | | ١ | | | | 5.227500000 GH |
| | | man | marchad | | | | | | | | | | | | him | | | |
| 0.0 | | | | | | | | | | | | | | | | | | Stop Fre |
| 0.0 | | | | | | | | | | | | | | | | | | 5.352500000 GH |
| 0.0 | | | | | | | | | | | | | | | | | ļ | |
| | | | 00 GH MHz | z | | | #VB | W 3.0 | MHz* | | | S | weep | | | 125.0 M (1001 j | pts) | CF Stej 12.500000 MH |
| | MODE | | | | × | | | Y | | | TION | FUNCTIO | ON WIDTH | | FUNCTI | DN VALUE | | <u>Auto</u> Ma |
| 1 2 | N N | 1 f 1 f | | | |) 125 G) 000 G | | | 46 dBn 48 dBn | | Power | 82. | 13 MHz | | 1 | 1.965 d | Bm [| |
| 3 | | | | | | | | | | | | | | | | | | Freq Offse |
| 5 6 | | | | | | | | | | | | | | | | | | 0 H |
| 7 | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | |
|) 1 | | | | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | |

Page 283 of 845

9.21. 802.11a 1TX SISO MODE IN THE 5.6 GHz BAND

9.21.1. 26 dB BANDWIDTH

<u>LIMITS</u>

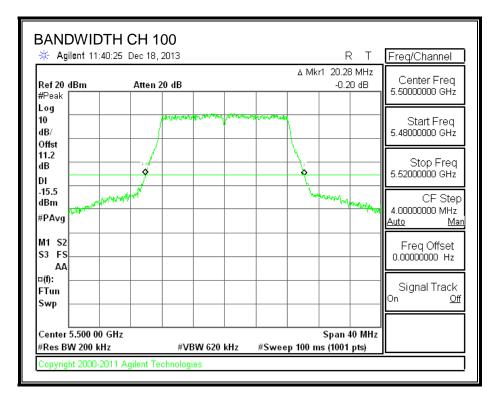
None; for reporting purposes only.

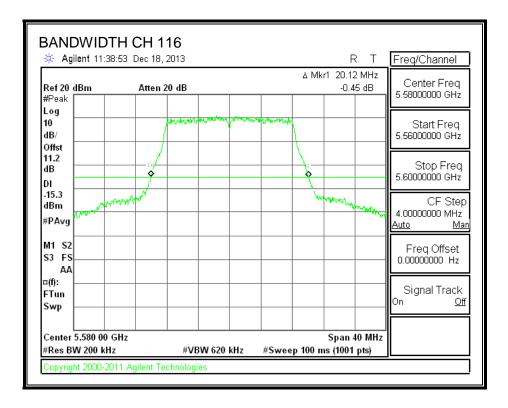
<u>RESULTS</u>

| Channel | Frequency | 26 dB Bandwidth |
|---------|-----------|-----------------|
| | (MHz) | (MHz) |
| 100 | 5500 | 20.28 |
| 116 | 5580 | 20.12 |
| 140 | 5700 | 20.24 |

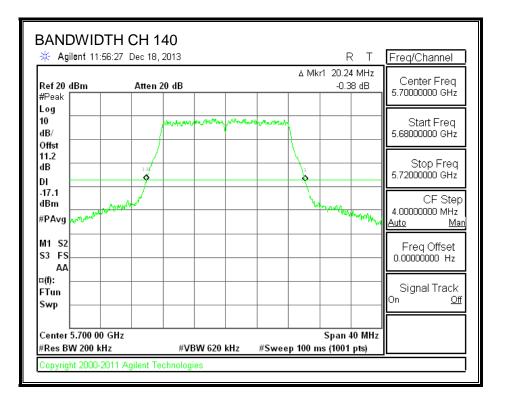
Page 284 of 845

26 dB BANDWIDTH





Page 285 of 845



Page 286 of 845

REPORT NO: 15U21905-E1V3 MODEL: ID:072 9.21.2. 99% BANDWIDTH

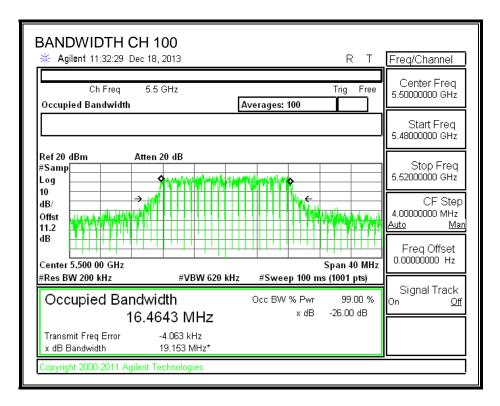
LIMITS

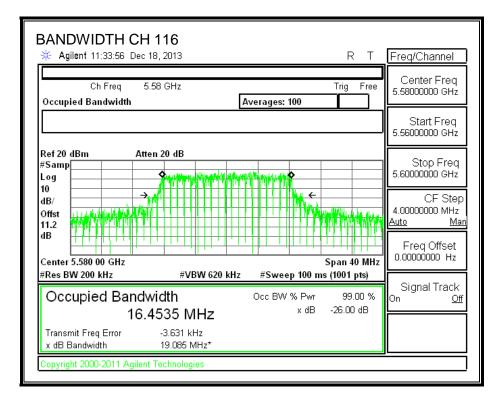
None; for reporting purposes only.

RESULTS

| Channel | Frequency | 99% Bandwidth |
|---------|-----------|---------------|
| | (MHz) | (MHz) |
| 100 | 5500 | 16.4643 |
| 116 | 5580 | 16.4535 |
| 140 | 5700 | 16.4480 |

Page 287 of 845





Page 288 of 845

| BANDWIDTH CH 1 Agilent 11:35:25 Dec 18,3 | | R | T F | req/Channel |
|---|------------------------|------------------------------------|-------|--|
| Ch Freq 5.7 (Occupied Bandwidth | ƏHz Averag | | ree 5 | .70000000 GHz |
| | | | 5 | Start Freq .68000000 GHz |
| Ref 20 dBm Atten 2 #Samp Log 10 | 0 dB | | 5 | Stop Freq .72000000 GHz |
| $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ | | | | CF Step .00000000 MHz . <u>uto Man</u> |
| Center 5.700 00 GHz #Res BW 200 kHz | #VBW 620 kHz #S | Span 40 M weep 100 ms (1001 pts | | Freq Offset 0.00000000 Hz |
| Occupied Bandwic 16.44 | % Or 3 | Signal Track n <u>Off</u> | | |
| x dB Bandwidth 1 | .271 kHz 9.061 MHz* | | | |
| Copyright 2000-2011 Agilent Ter | chnologies | | | |

Page 289 of 845

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 11.21 dB (including 10 dB pad and 1.21 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

| Channel | Frequency | Power |
|---------|-----------|-------|
| | (MHz) | (dBm) |
| 100 | 5500 | 20.22 |
| 116 | 5580 | 19.56 |
| 140 | 5700 | 17.95 |

Page 290 of 845

REPORT NO: 15U21905-E1V3 MODEL: ID:072 9.21.4. OUTPUT POWER AND PPSD

<u>LIMITS</u>

FCC §15.407 (a) (2)

For the band 5.5–5.7 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 peak 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.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

| Antenna | |
|---------|--|
| Gain | |
| (dBi) | |
| 2.40 | |

Page 291 of 845

Bandwidth and Antenna Gain

| Channel | Frequency | Min | Min | Directional |
|---------|-----------|-------|---------|-------------|
| | | 26 dB | 99% | Gain |
| | | BW | BW | |
| | (MHz) | (MHz) | (MHz) | (dBi) |
| 100 | 5500 | 20.28 | 16.4643 | 2.82 |
| 116 | 5580 | 20.12 | 16.4535 | 2.82 |
| 140 | 5700 | 20.24 | 16.4480 | 2.82 |

Limits

| Channel | Frequency | FCC | IC | IC | Power | FCC | IC | PPSD |
|---------|-----------|-------|-------|-------|-------|-------|-------|-------|
| | | Power | Power | EIRP | Limit | PPSD | PSD | Limit |
| | | Limit | Limit | Limit | | Limit | Limit | |
| | (MHz) | (dBm) |
| 100 | 5500 | 24.00 | 23.17 | 29.17 | 23.17 | 11.00 | 11.00 | 11.00 |
| 116 | 5580 | 24.00 | 23.16 | 29.16 | 23.16 | 11.00 | 11.00 | 11.00 |
| 140 | 5700 | 24.00 | 23.16 | 29.16 | 23.16 | 11.00 | 11.00 | 11.00 |

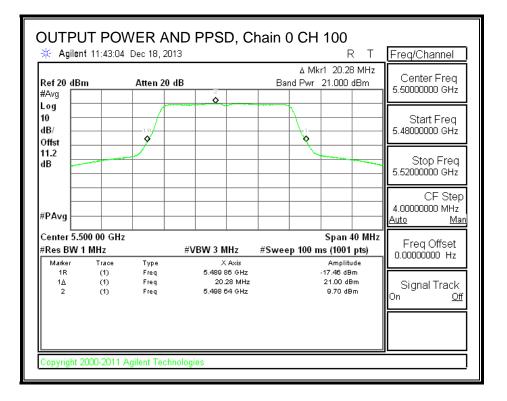
Duty Cycle CF (dB) 0.22 Included in Calculations of Corr'd Power & PPSD

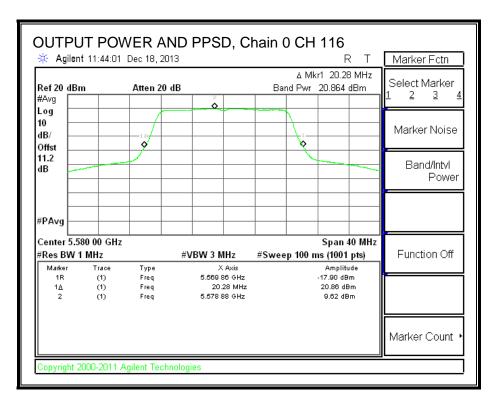
Output Power Results

| Channel | Frequency | Chain 0 | Total | Power | Power |
|---------|-----------|---------|--------|-------|--------|
| | | Meas | Corr'd | Limit | Margin |
| | | Power | Power | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dB) |
| 100 | 5500 | 21.00 | 21.22 | 23.17 | -1.95 |
| 116 | 5580 | 20.86 | 21.08 | 23.16 | -2.08 |
| 140 | 5700 | 19.04 | 19.26 | 23.16 | -3.90 |

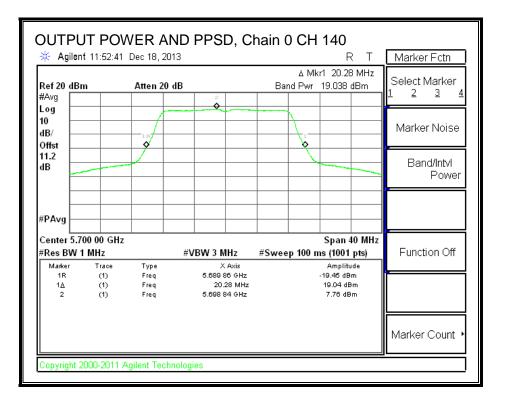
PPSD Results

| Channel | Frequency | Chain 0 | Total | PPSD | PPSD |
|---------|-----------|---------|--------|-------|--------|
| | | Meas | Corr'd | Limit | Margin |
| | | PPSD | PPSD | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dB) |
| 100 | 5500 | 9.70 | 9.92 | 11.00 | -1.08 |
| 116 | 5580 | 9.62 | 9.84 | 11.00 | -1.16 |
| 140 | 5700 | 7.76 | 7.98 | 11.00 | -3.02 |





Page 293 of 845



Page 294 of 845

9.22. 802.11n HT20 1TX SISO MODE IN THE 5.6 GHz BAND

9.22.1. 26 dB BANDWIDTH

LIMITS

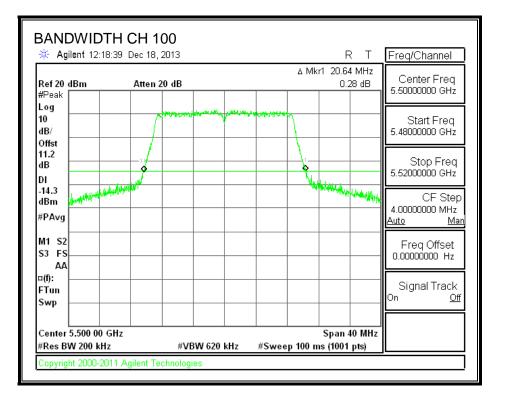
None; for reporting purposes only.

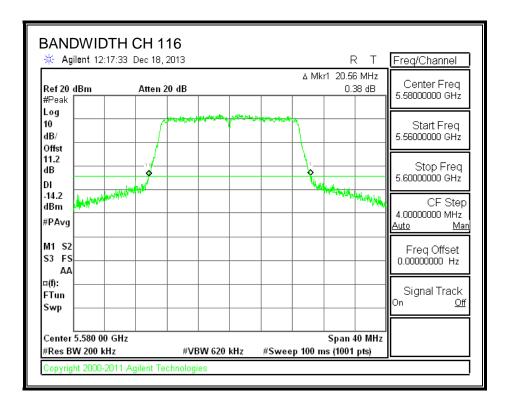
RESULTS

| Channel | Frequency | 26 dB Bandwidth |
|---------|-----------|-----------------|
| | (MHz) | (MHz) |
| 100 | 5500 | 20.64 |
| 116 | 5580 | 20.56 |
| 140 | 5700 | 20.60 |

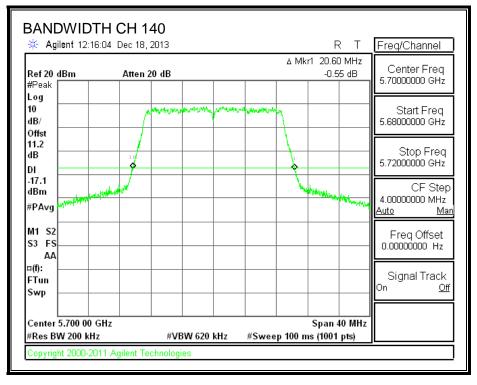
Page 295 of 845

26 dB BANDWIDTH





Page 296 of 845



Page 297 of 845

REPORT NO: 15U21905-E1V3 MODEL: ID:072 9.22.2. 99% BANDWIDTH

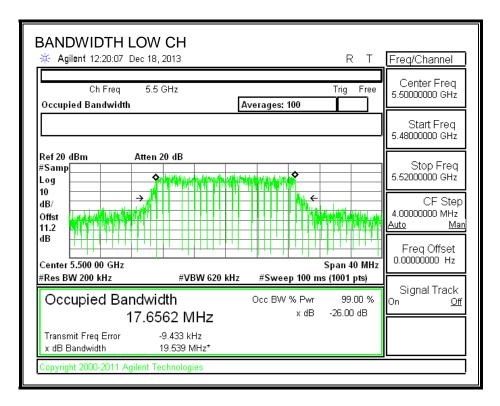
LIMITS

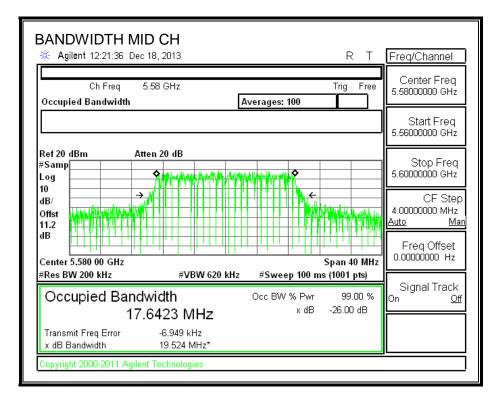
None; for reporting purposes only.

<u>RESULTS</u>

| Channel | Frequency | 99% Bandwidth |
|---------|-----------|---------------|
| | (MHz) | (MHz) |
| 100 | 5500 | 17.6562 |
| 116 | 5580 | 17.6423 |
| 140 | 5700 | 17.6592 |

Page 298 of 845





Page 299 of 845

| BANDWIDTH HIGH CH | Freq/Channel |
|--|--|
| Ch Freq 5.7 GHz Trig Free Occupied Bandwidth Averages: 100 | Center Freq 5.70000000 GHz |
| | Start Freq 5.6800000 GHz |
| Ref 20 dBm Atten 20 dB #Samp Log | Stop Freq 5.7200000 GHz |
| dB/ dB/ Offst 11.2 → 0 → 0 → 0 → 0 → 0 → 0 → 0 → 0 → 0 → | CF Step 4.00000000 MHz <u>Auto Man</u> |
| dB Center 5.700 00 GHz Span 40 MHz | Freq Offset 0.00000000 Hz |
| #Res BW 200 kHz #VBW 620 kHz #Sweep 100 ms (1001 pts) Occupied Bandwidth Occ BW % Pwr 99.00 % 17.6592 MHz × dB -26.00 dB | Signal Track On <u>Off</u> |
| Transmit Freq Error -6.530 kHz x dB Bandwidth 19.577 MHz* | |
| Copyright 2000-2011 Agilent Technologies | |

Page 300 of 845

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 11.21 dB (including 10 dB pad and 11.21 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

| Channel | Frequency | Power |
|---------|-----------|-------|
| | (MHz) | (dBm) |
| 100 | 5500 | 21.26 |
| 116 | 5580 | 21.17 |
| 140 | 5700 | 19.84 |

Page 301 of 845

<u>LIMITS</u>

FCC §15.407 (a) (2)

For the band 5.5–5.7 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 peak 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.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

| Antenna | |
|---------|--|
| Gain | |
| (dBi) | |
| 2.82 | |

Page 302 of 845

Bandwidth and Antenna Gain

| Channel | Frequency | Min | Min | Directional |
|---------|-----------|-------|------------|-------------|
| | | 26 dB | 99% | Gain |
| | | BW | BW | |
| | (MHz) | (MHz) | (MHz) | (dBi) |
| 100 | 5500 | 20.6 | 17.7 | 2.82 |
| 116 | 5580 | 20.6 | 17.6 | 2.82 |
| 140 | 5700 | 20.6 | 17.7 | 2.82 |

Limits

| Channel | Frequency | FCC | IC | IC | Power | FCC | IC | PPSD |
|---------|-----------|-------|-------|-------|-------|-------|-------|-------|
| | | Power | Power | EIRP | Limit | PPSD | PSD | Limit |
| | | Limit | Limit | Limit | | Limit | Limit | |
| | (MHz) | (dBm) |
| 100 | 5500 | 24.00 | 23.47 | 29.47 | 23.47 | 11.00 | 11.00 | 11.00 |
| 116 | 5580 | 24.00 | 23.47 | 29.47 | 23.47 | 11.00 | 11.00 | 11.00 |
| 140 | 5700 | 24.00 | 23.47 | 29.47 | 23.47 | 11.00 | 11.00 | 11.00 |

 Duty Cycle CF (dB)
 0.22
 Included in Calculations of Corr'd Power & PPSD

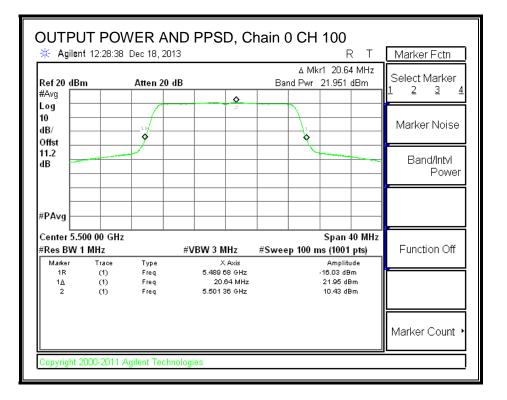
Output Power Results

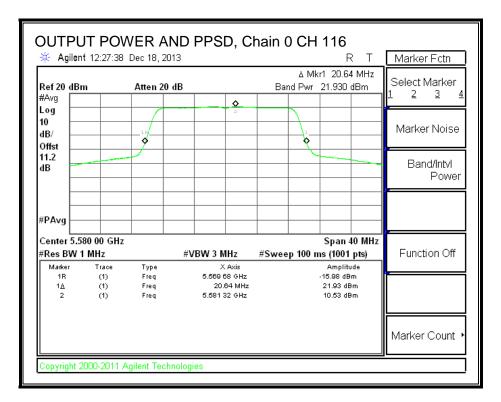
| Channel | Frequency | Chain 0 | Total | Power | Power |
|---------|-----------|---------|--------|-------|--------|
| | | Meas | Corr'd | Limit | Margin |
| | | Power | Power | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dB) |
| 100 | 5500 | 21.95 | 22.17 | 23.47 | -1.30 |
| 116 | 5580 | 21.93 | 22.15 | 23.47 | -1.32 |
| 140 | 5700 | 19.07 | 19.29 | 23.47 | -4.18 |

PPSD Results

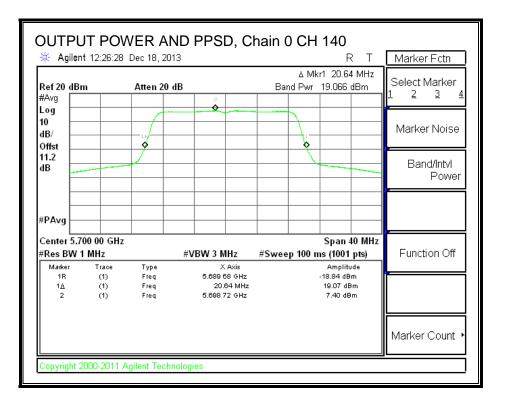
| Channel | Frequency | Chain 0 | Total | PPSD | PPSD |
|---------|-----------|---------|--------|-------|--------|
| | | Meas | Corr'd | Limit | Margin |
| | | PPSD | PPSD | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dB) |
| 100 | 5500 | 10.43 | 10.65 | 11.00 | -0.35 |
| 116 | 5580 | 10.53 | 10.75 | 11.00 | -0.25 |
| 140 | 5700 | 7.40 | 7.62 | 11.00 | -3.38 |

Page 303 of 845





Page 304 of 845



Page 305 of 845

<u>LIMITS</u>

FCC §15.407 (a) (6)

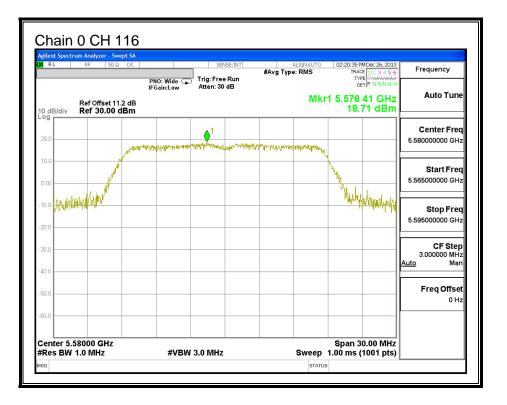
The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the peak transmit power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

RESULTS

| Channel | Frequency | PK Level | PSD | DCCF | Peak Excursion | Limit | Margin |
|---------|-----------|----------|-------|------|----------------|-------|--------|
| | (MHz) | (dBm) | (dBm) | (dB) | (dB) | (dB) | (dB) |
| 116 | 5580 | 18.71 | 10.53 | 0.22 | 7.96 | 13 | -5.04 |

Page 306 of 845

PEAK EXCURSION, Chain 0



Page 307 of 845

REPORT NO: 15U21905-E1V3

MODEL: ID:072

9.23. 802.11ac 20MHz LEGACY 1TX MODE, CHANNEL 144, 5.6 GHz BAND

9.23.1. 26 dB BANDWIDTH

<u>LIMITS</u>

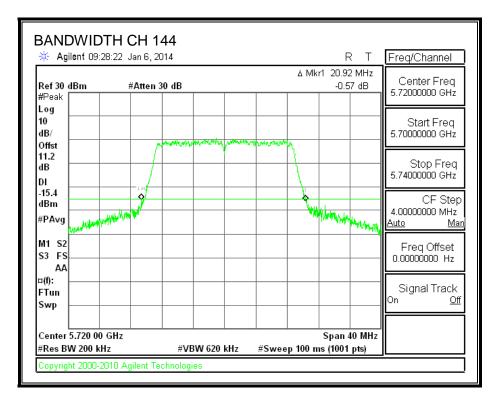
None; for reporting purposes only.

RESULTS

| Channel | Frequency | 26 dB Bandwidth |
|---------|-----------|-----------------|
| | (MHz) | (MHz) |
| 144 | 5720 | 20.92 |

Page 308 of 845

26 dB BANDWIDTH



Page 309 of 845

REPORT NO: 15U21905-E1V3 MODEL: ID:072 9.23.2. 99% BANDWIDTH

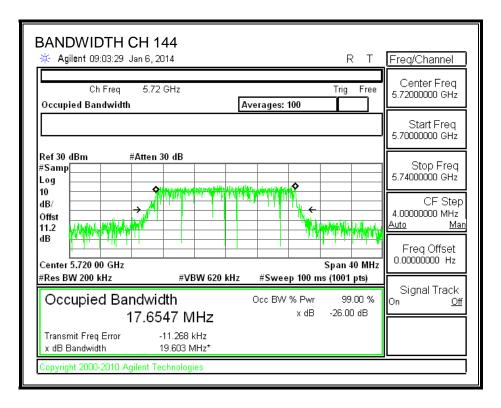
LIMITS

None; for reporting purposes only.

RESULTS

| Channel | Frequency | 99% Bandwidth |
|---------|-----------|---------------|
| | (MHz) | (MHz) |
| 144 | 5720 | 17.6547 |

Page 310 of 845



Page 311 of 845

REPORT NO: 15U21905-E1V3 MODEL: ID:072 9.23.3. OUTPUT POWER AND PSD

<u>LIMITS</u>

FCC §15.407 (a) (2)

For the band 5.5–5.7 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 peak 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.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

| Antenna | |
|---------|--|
| Gain | |
| (dBi) | |
| 2.82 | |

Page 312 of 845

Limits (FCC), portion in UNII 2 ext band

Bandwidth and Antenna Gain

| Channel | Frequency | Min | Min | Directional |
|---------|-----------|-------|---------|-------------|
| | | 26 dB | 99% | Gain |
| | | BW | BW | |
| | (MHz) | (MHz) | (MHz) | (dBi) |
| 144 | 5720 | 15.46 | 13.8274 | 2.82 |

Limits

| Channel | Frequency | FCC | IC | IC | Power | FCC | IC | PSD |
|---------|-----------|-------|-------|-------|-------|-------|-------|-------|
| | | Power | Power | EIRP | Limit | PSD | PSD | Limit |
| | | Limit | Limit | Limit | | Limit | Limit | |
| | (MHz) | (dBm) |
| 144 | 5720 | 22.89 | 22.41 | 28.41 | 22.41 | 11.00 | 11.00 | 11.00 |

Output Power Results

| Channel | Frequency | Chain 0 | Total | Power | Power |
|---------|-----------|---------|--------|-------|--------|
| | | Meas | Corr'd | Limit | Margin |
| | | Power | Power | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dB) |
| 144 | 5720 | 19.58 | 19.80 | 22.41 | -2.61 |

PSD Results

| Channel | Frequency | Chain 0 | Total | PSD | PSD |
|---------|-----------|---------|--------|-------|--------|
| | | Meas | Corr'd | Limit | Margin |
| | | PSD | PSD | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dB) |
| 144 | 5720 | 8.900 | 9.12 | 11.00 | -1.88 |

| Duty Cycle CF (dB) | 0.22 | Included in Calculations of Corr'd Power & PPSD |
|--------------------|------|---|
|--------------------|------|---|

Page 313 of 845

REPORT NO: 15U21905-E1V3 MODEL: ID:072

Bandwidth and Antenna Gain

| Channel | Frequency | Min | Min | Directional |
|---------|-----------|-------|--------|-------------|
| | | 26 dB | 99% | Gain |
| | | BW | BW | |
| | (MHz) | (MHz) | (MHz) | (dBi) |
| 144 | 5720 | 5.46 | 3.8274 | 2.82 |

Limits

| Channel | Frequency | FCC | IC | IC | Power | FCC | IC | PSD |
|---------|-----------|-------|-------|-------|-------|-------|-------|-------|
| | | Power | Power | EIRP | Limit | PSD | PSD | Limit |
| | | Limit | Limit | Limit | | Limit | Limit | |
| | (MHz) | (dBm) |
| 144 | 5720 | 18.37 | 16.83 | 22.83 | 16.83 | 11.00 | 11.00 | 11.00 |

Output Power Results

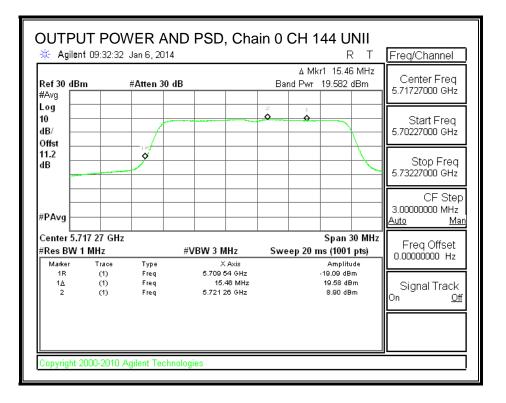
| Channel | Frequency | Chain 0 | Total | Power | Power |
|---------|-----------|---------|--------|-------|--------|
| | | Meas | Corr'd | Limit | Margin |
| | | Power | Power | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dB) |
| 144 | 5720 | 14.03 | 14.25 | 16.83 | -2.58 |

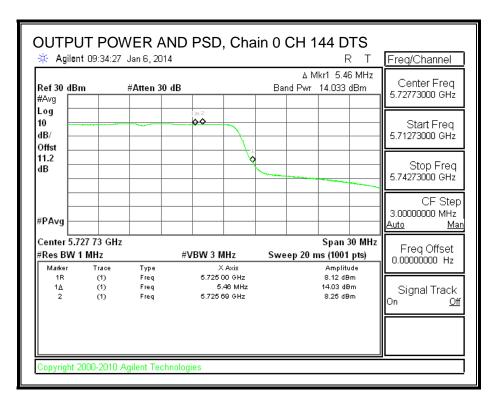
PSD Results

| Channel | Frequency | Chain 0 | Total | PSD | PSD |
|---------|-----------|---------|--------|-------|--------|
| | | Meas | Corr'd | Limit | Margin |
| | | PSD | PSD | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dB) |
| 144 | 5720 | 8.250 | 8.47 | 11.00 | -2.53 |

| Duty Cycle CF (dB) | 0.22 | Included in Calculations of Corr'd Power & PPSD |
|--------------------|------|---|
|--------------------|------|---|

Page 314 of 845





Page 315 of 845

9.24. 802.11n HT20 3TX CDD MODE IN THE 5.6 GHz BAND

9.24.1. 26 dB BANDWIDTH

LIMITS

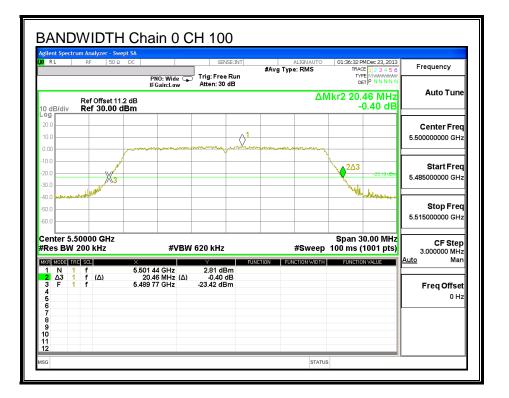
None; for reporting purposes only.

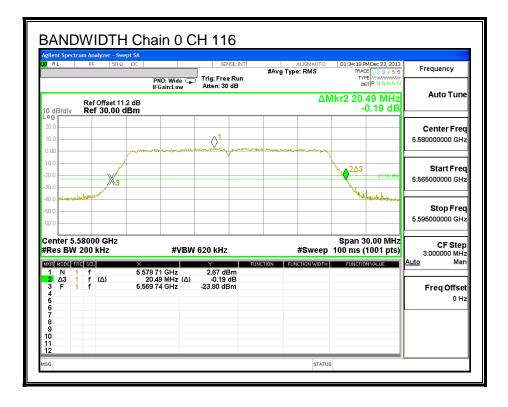
<u>RESULTS</u>

| Channel | Frequency | 26 dB BW | 26 dB BW | 26 dB BW |
|---------|-----------|----------|----------|----------|
| | | Chain 0 | Chain 1 | Chain 2 |
| | (MHz) | (MHz) | (MHz) | (MHz) |
| 100 | 5500 | 20.46 | 20.46 | 20.55 |
| 116 | 5580 | 20.49 | 20.37 | 20.40 |
| 140 | 5700 | 20.67 | 20.46 | 20.61 |

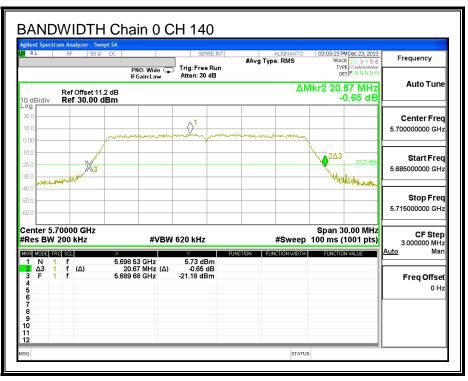
Page 316 of 845

26 dB BANDWIDTH, Chain 0

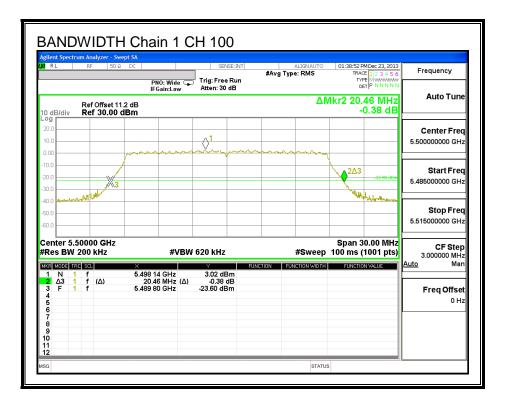




Page 317 of 845

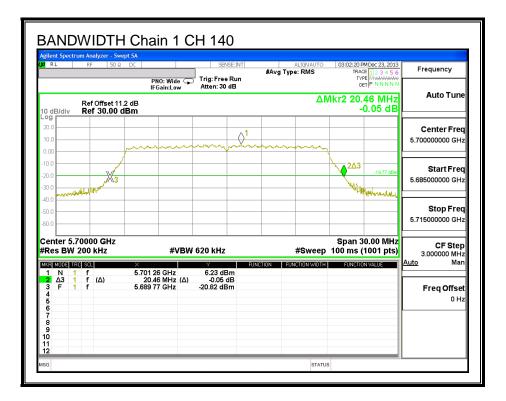


26 dB BANDWIDTH, Chain 1



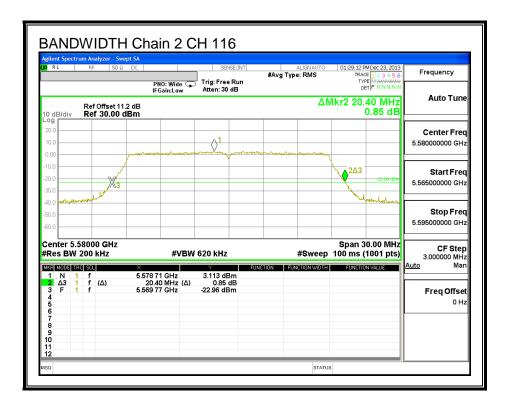
Page 318 of 845

| Agilent Spect <mark>V</mark> RL | RF | | DC PNO | :Wide 🕞 | SENSE:I | #Av | ALIGNAUTO g Type: RMS | TYPE M | C 23, 2013 2 3 4 5 6 WWWWWW N N N N N | Frequency |
|------------------------------------|-------------|------------------------|------------------------------------|--|------------------------------------|--|--------------------------|--------------------------|--|----------------------------------|
| 0 dB/div | | ffset 11.2 30.00 dE | dB | in:Low | Atten: 30 dB | | ΔN | 1kr2 20.37 | | Auto Tune |
| -og 20.0 10.0 0.00 | | | | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | 1 martin | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | · | | | Center Fre 5.580000000 GH |
| 10.0 20.0 30.0 | | ×3 | | | | | | 2Δ3 | -22.01 dBm | Start Free 5.565000000 GH |
| 40.0 | was high of | | | | | | | | set-compo | Stop Fre 5.59500000 GH |
| Center 5 #Res BW | 200 k | | | #VBW | / 620 kHz | | • | Span 30.0 100 ms (100 | 01 pts) | CF Stej 3.000000 MH uto Ma |
| 2 ∆3 | 1 f | ۵) | × 5.578 80 20.37 5.569 80 | MHz (Δ) | 3.19 dBm -0.10 dB -22.50 dBm | FUNCTION | FUNCTION WIDTH | FUNCTION VA | | Freq Offse 0 H |



Page 319 of 845

| RL | RI | F 50 | P | NO: Wide G | . | Run | #Avg Typ | ALIGN AUTO e: RMS | TRAC | MDec 23, 2013 E 1 2 3 4 5 6 PE MWWWWW T P N N N N N | Frequency |
|-------------------------------|------------|-----------------------|--------------|------------|--------------|------|----------|----------------------|----------|--|-----------------------|
| dB/div | | f Offset 1 f 30.00 | | Gain:Low | Atten: 30 6 | 10 | | ΔN | 1kr2 20. | 55 MHz 0.23 dB | Auto Tun |
| | | | | | | | | | | | Center Fre |
| 0.0 | | | | | and 1 | , | | mon | | | 5.500000000 GH |
| | | | | | | | | | 2Δ3 | | Start Free |
| 1.0 | | Aufren 1/3 | | | | | | | Yulul A | -29:12 dBm | 5.485000000 GH |
| 1.0 1.0 <mark>2.424</mark> | kruntik | | | | | | | | | "Whichest and the | Stop Fre |
| 1.0 | | | | | | | | | | | 5.515000000 GH |
| enter 5 Res BM | | 00 GHz kHz | | #VBV | V 620 kHz | | | #Sweep | | 0.00 MHz 1001 pts) | CF Ste 3.000000 MH |
| r Mode N | RC SC |] | X 5 400 3 | 35 GHz | Y 2.88 dB | FUNC | | ICTION WIDTH | FUNCTIO | | Auto Ma |
| Δ3 | 1 f 1 f | (Δ) | | 55 MHz (Δ) | | в | | | | | Freq Offse |
| * 5 7 | | | | | | | | | | | 0 Н |
| 7 3 9 | | | | | | | | | | | |
| 5 1 | | | | | | | | | | | |



Page 320 of 845

| R L | | RF | er - Swep 50 Ω | | | | SENS | E:INT | | ALIGN AUTO | 03:01:11 F | MDec 23, 2013 | |
|------------------|-------|-----------------|--------------------|----------------------|----------------|-------|-------------------------|--------------------------|---------------|----------------|------------|-----------------------|------------------------------------|
| | | | | | NO: Wide | | Trig: Free Atten: 30 | | #Avg | Type: RMS | TY | | Frequency |
| dB/div | | | set 11.2 0.00 d | dB | Gain:Low | | Atten: 30 | 40 | | ΔI | /kr2 20. | 61 MHz 0.46 dB | Auto Tune |
| | | | | | | | | 1 | | | | | Center Free 5.700000000 GH |
| .00 | | | | لىمىمەر مەرىپىي | when | ~~~~~ | manny | , where we have a second | harrenterment | www. | | | 5.70000000 GH |
|).0 | | | Жз | | | | | | | | 2Δ3 | -20.16 dBm | Start Free 5.685000000 GH |
| 1.0 1.0 | white | halle | | | | | | | | | - will | Villeyhorseehely | Oton Ero |
| I.O | | | | | | | | | | | | | Stop Free 5.715000000 GH |
| enter tes B | | | | | #V | BW (| 620 kHz | | | #Sweep | | 0.00 MHz 1001 pts) | CF Stej 3.000000 MH |
| FMODE N Δ3 | 1 | CU f f (Δ |) | × 5.701 2 20 f | 6 GHz 1 MHz | (A) | 5.84 dB -0.46 d | m | NCTION | FUNCTION WIDTH | FUNCTIO | IN VALUE | <u>Auto</u> Mar |
| F | | f | | 5.6897 | | -' | -20.92 dB | | | | | | Freq Offse 0 H |
| 5 7 3 | | | | | | | | | | | | | |
|)) | | | | | | | | | | | | | |

Page 321 of 845

REPORT NO: 15U21905-E1V3 MODEL: ID:072 9.24.2. 99% BANDWIDTH

LIMITS

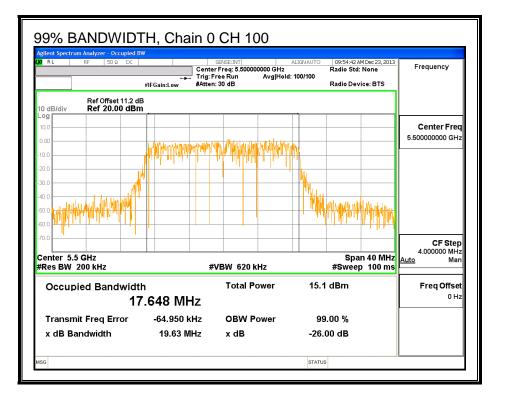
None; for reporting purposes only.

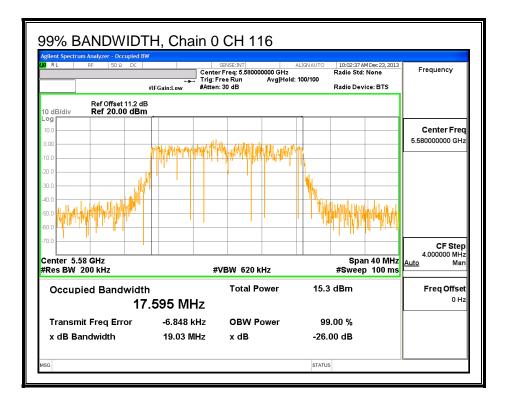
<u>RESULTS</u>

| Channel | Frequency | 99% BW | 99% BW | 99% BW |
|---------|-----------|---------|---------|---------|
| | | Chain 0 | Chain 1 | Chain 2 |
| | (MHz) | (MHz) | (MHz) | (MHz) |
| 100 | 5500 | 17.648 | 17.589 | 17.657 |
| 116 | 5580 | 17.595 | 17.665 | 17.671 |
| 140 | 5700 | 17.671 | 17.724 | 17.705 |

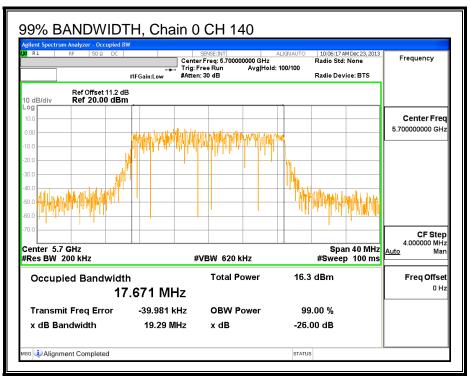
Page 322 of 845

99% BANDWIDTH, Chain 0

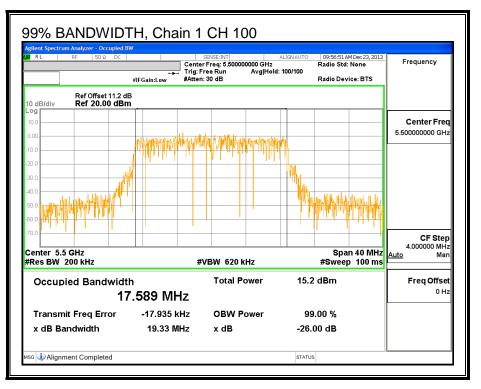




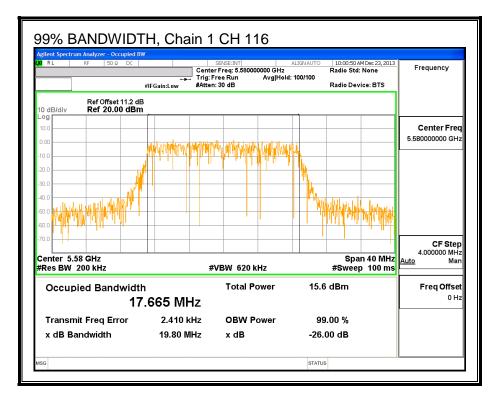
Page 323 of 845

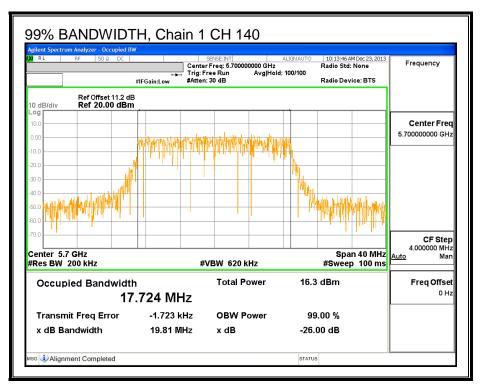


99% BANDWIDTH, Chain 1

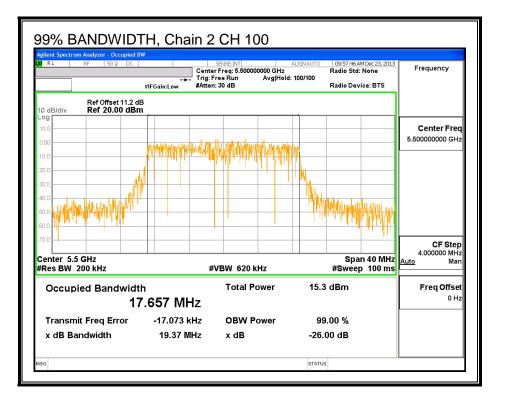


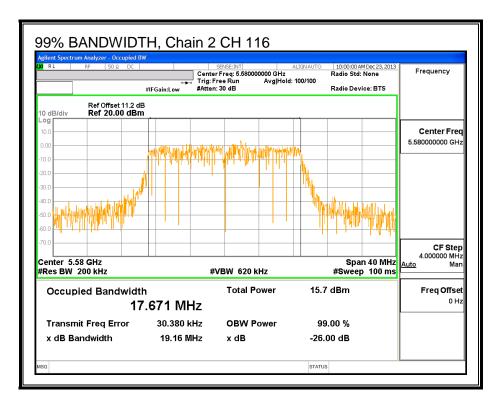
Page 324 of 845



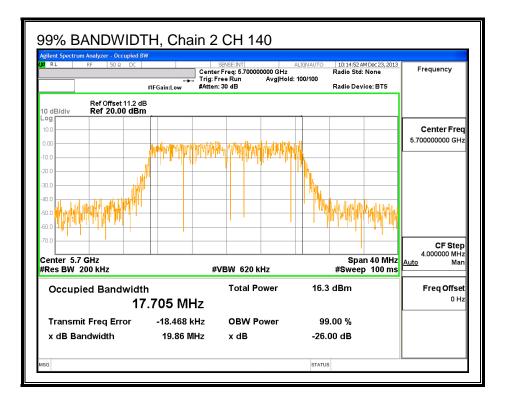


Page 325 of 845





Page 326 of 845



Page 327 of 845

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 11.21 dB (including 10 dB pad and 1.21 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

Average Power Results

| Channel | Frequency | Chain 0 | Chain 1 | Chain 2 | Total |
|---------|-----------|---------|---------|---------|-------|
| | | Power | Power | Power | Power |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) |
| 100 | 5500 | 13.22 | 13.45 | 13.88 | 18.30 |
| 116 | 5580 | 12.03 | 12.21 | 12.51 | 17.03 |
| 140 | 5700 | 14.45 | 14.41 | 14.75 | 19.31 |

Page 328 of 845

<u>LIMITS</u>

FCC §15.407 (a) (2)

For the band 5.5–5.7 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 peak 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.

DIRECTIONAL ANTENNA GAIN

The TX chains are correlated and the antenna gain is the same for each chain. The directional gain is:

| Antenna | 10 * Log (3 chains) | Correlated Chains |
|---------|---------------------|--------------------------|
| Gain | | Directional Gain |
| (dBi) | (dB) | (dBi) |
| 2.82 | 4.77 | 7.59 |

Page 329 of 845

Bandwidth and Antenna Gain

| Channel | Frequency | Min | Min | Directional | Directional |
|---------|-----------|-------|------------|-------------|-------------|
| | | 26 dB | 99% | Gain | Gain |
| | | BW | BW | for Power | for PPSD |
| | (MHz) | (MHz) | (MHz) | (dBi) | (dBi) |
| 100 | 5500 | 20.46 | 17.589 | 2.82 | 7.59 |
| 116 | 5580 | 20.37 | 17.595 | 2.82 | 7.59 |
| 140 | 5700 | 20.46 | 17.671 | 2.82 | 7.59 |

Limits

| Channel | Frequency | FCC | IC | IC | Power | FCC | IC | PPSD |
|---------|-----------|-------|-------|-------|-------|-------|-------|-------|
| | | Power | Power | EIRP | Limit | PPSD | PSD | Limit |
| | | Limit | Limit | Limit | | Limit | Limit | |
| | (MHz) | (dBm) |
| 100 | 5500 | 24.00 | 23.45 | 29.45 | 23.45 | 9.41 | 11.00 | 9.41 |
| 116 | 5580 | 24.00 | 23.45 | 29.45 | 23.45 | 9.41 | 11.00 | 9.41 |
| 140 | 5700 | 24.00 | 23.47 | 29.47 | 23.47 | 9.41 | 11.00 | 9.41 |

Duty Cycle CF (dB) 0.22 Included in Calculations of Corr'd Power & PPSD

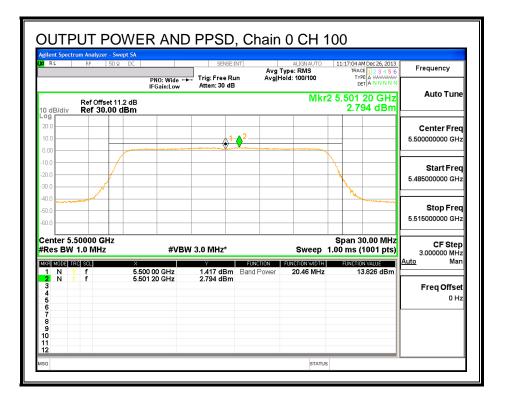
Output Power Results

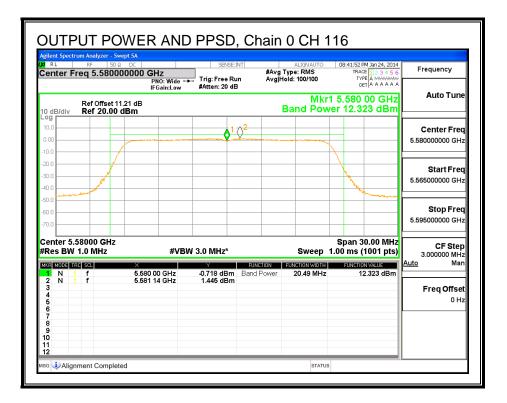
| Channel | Frequency | Chain 0 | Chain 1 | Chain 2 | Total | Power | Power |
|---------|-----------|---------|---------|---------|--------|-------|--------|
| | | Meas | Meas | Meas | Corr'd | Limit | Margin |
| | | Power | Power | Power | Power | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dBm) | (dB) |
| 100 | 5500 | 13.83 | 13.76 | 14.17 | 18.91 | 23.45 | -4.54 |
| 116 | 5580 | 12.32 | 12.34 | 12.69 | 17.44 | 23.45 | -6.01 |
| 140 | 5700 | 15.62 | 15.38 | 15.75 | 20.58 | 23.47 | -2.90 |

PPSD Results

| Channel | Frequency | Chain 0 | Chain 1 | Chain 2 | Total | PPSD | PPSD |
|---------|-----------|---------|---------|---------|--------|-------|--------|
| | | Meas | Meas | Meas | Corr'd | Limit | Margin |
| | | PPSD | PPSD | PPSD | PPSD | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dBm) | (dB) |
| 100 | 5500 | 2.79 | 2.97 | 3.16 | 7.97 | 9.41 | -1.44 |
| 116 | 5580 | 1.45 | 1.29 | 1.62 | 6.45 | 9.41 | -2.96 |
| 140 | 5700 | 4.31 | 4.29 | 4.56 | 9.38 | 9.41 | -0.03 |

Page 330 of 845

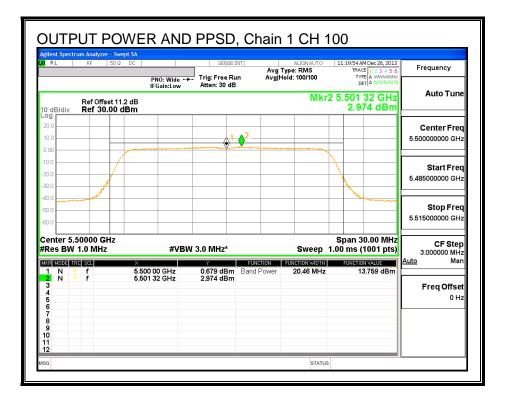




Page 331 of 845

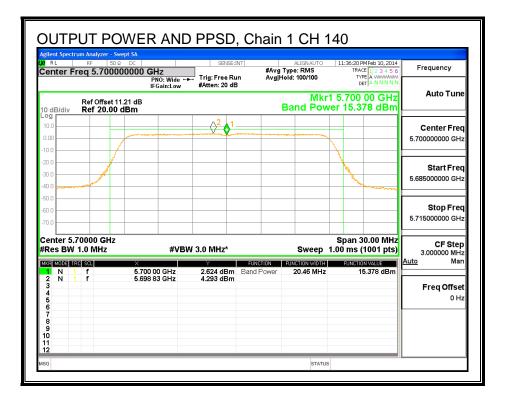
| enter F | req 5. | 50 Ω 70000 | 0000 GH | IO: Wide 🛏 | Trig: Free | | | ALIGN AUTO Type: RMS Iold: 100/100 | TF | B PM Feb 10, 2014 RACE 1 2 3 4 5 6 TYPE A WANNAN DET A N N N N N | Frequency |
|--------------------|------------|-----------------------|--------------------|------------|----------------------|----|-----------|--|--------------|---|----------------------------|
| dB/div | | ffset 11.2 20.00 d | 21 dB | Sain:Low | #Atten: 20 | dB | | Mkr Band Pow | | 0 00 GHz | Auto Tun |
| 0.0 | | | | | <mark>∕2</mark> | 1 | | | | | Center Fre |
| .00 | | | | | ¥-\$ | | ***** | - | <u>\</u> | | 5.700000000 GH |
| 0.0 | | | | | | | | | \mathbf{i} | | |
| 1.0 1.0 | | / | | | | | | | - No. | | Start Fre |
| 0.0 | | - | | | | | | | ٦, | | 5.685000000 GH |
| 0.0 | | | | | | | | | | | |
| 0.0 | | | | | | | | | | | Stop Fre 5.715000000 GH |
| 0.0 | | | | | | | | | | | |
| enter 5. Res BW | | | | #VB\ | N 3.0 MHz* | : | | Sweep | | 30.00 MHz (1001 pts) | CF Ste 3.000000 MH |
| R MODE T | | | х | | Y | | | FUNCTION WIDTH | FUNC | TION TALOL | <u>Auto</u> Ma |
| 1 N 2 N | 1 f 1 f | | 5.700 0 5.698 9 | | 2.384 dE 4.310 dE | | and Power | 20.67 MHz | | 15.619 dBm | |
| 3 4 5 | | | | | | | | | | | Freq Offse 0 H |
| 5 7 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 1 | | | | | | | | | | | |

OUTPUT POWER AND PPSD, Chain 1



Page 332 of 845

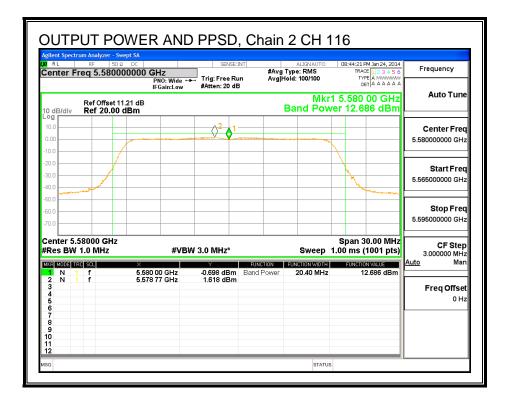
| ilent Spectrum Anal RL RF enter Freq 5 | 50 Ω DC | PNO: Wide 🛏 | SENSE: ► Trig: Free Ri #Atten: 20 di | #Avg un Avg t | ALIGNAUTO Type: RMS fold: 100/100 | TRA | PM Jan 24, 2014 CE 1 2 3 4 5 6 (PE A MWWWWW DET A A A A A A | Frequency |
|--|------------------------------|----------------------|--|------------------|---|----------------------|--|-------------------------------------|
|) dB/div Ref | Dffset 11.21 dB 20.00 dBm | IFGain:Low | #Atten: 20 di | | Mkr Band Pow | | 00 GHz 38 dBm | Auto Tune |
| 0.0 | | | | | | | | Center Fred 5.580000000 GH; |
| 0.0 | | | | | |) and by by | | Start Frec 5.565000000 GH; |
| 0.0 | | | | | | | | Stop Frec 5.595000000 GH; |
| enter 5.58000 Res BW 1.0 M | Hz | #VB | № 3.0 MHz* | | • | 1.00 ms | 30.00 MHz (1001 pts) | CF Step 3.000000 MH Auto Mar |
| Image Mode TRC Sct 1 N 1 f 2 N 1 f 3 - - - 4 - - - 5 - - - 6 - - - 7 - - - 8 - - - 9 - - - 1 - - - | | 0 00 GHz 9 01 GHz | -0.042 dBm 1.293 dBm | | FUNCTION WIDTH 20.37 MHz | | ON VALUE 12.338 dBm | Freq Offse |



Page 333 of 845

REPORT NO: 15U21905-E1V3 MODEL: ID:072 OUTPUT POWER AND PPSD, Chain 2

| Avg Type: RMS TR/ /ide +++ Trig: Free Run Avg Hold: 100/100 T | 5AM Dec 26, 2013 Frequency FYPE A WANNAWA DET A N N N N N |
|---|--|
| Mkr2 5.501 | Auto Tur |
| | Center Free |
| <u>↓</u> | 5.50000000 GH |
| | Start Free |
| | 5.485000000 GH |
| | Stop Free |
| | 5.515000000 GH |
| Span #VBW 3.0 MHz* Sweep 1.00 ms | 30.00 MHz CF Step (1001 pts) 3.00000 MH |
| Y FUNCTION FUNCTION WIDTH FUNCT Iz 1.629 dBm Band Power 20.55 MHz | TONVALUE Auto Mar 14.169 dBm |
| Iz 3.161 dBm | FreqOffse |
| | 0 H |
| | |
| | |



Page 334 of 845

| RL RF | alyzer - Swept SA 50 Ω DC 5.700000000 | PNO: Wide + | SENSE: | #Avg In Avg | ALIGN AUTO Type: RMS Hold: 100/100 | 11:3 | 9:16 PM Feb 10, 2 TRACE 1 2 3 4 TYPE A WWA DET A N N N | 5 6 Frequency |
|--|---|--------------------------|-----------------------------|------------------------|--|-------------|---|-------------------------------------|
| IFGain:Low #Atten: 20 dB Ref Offset 11.21 dB 10 dB/div Ref 20.00 dBm | | | | | Mkr | A | | |
| og 10.0 0.00 | | | 1 | ♦ ² | | | | Center Freq 5.700000000 GHz |
| 0.0 0.0 0.0 | A A A A A A A A A A A A A A A A A A A | | | | | \ \ \ | An and a second | 5.685000000 GHz |
| i0.0 i0.0 i0.0 | | | | | | | | Stop Freq 5.715000000 GHz |
| enter 5.7000 Res BW 1.0 | MHz | #VB | W 3.0 MHz* | | • | 1.00 n | an 30.00 M ns (1001 p | ts) 3.000000 MHz |
| MODE TRC SCI 1 N 1 f 2 N 1 f 3 - - - 4 - - - 5 - - - 6 - - - 7 - - - 9 - - - 1 - - - 2 - - - - | 5.7 | 700 00 GHz 701 14 GHz | ¥ 2.697 dBm 4.558 dBm | FUNCTION Band Power | FUNCTION WIDTH 20.61 MHz | FU | NCTION VALUE | m Freq Offset |

Page 335 of 845

<u>LIMITS</u>

FCC §15.407 (a) (6)

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the peak transmit power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

RESULTS

Chain 0

| Channel | Frequency | PK Level | PSD | DCCF | Peak Excursion | Limit | Margin |
|---------|-----------|----------|-------|------|----------------|-------|--------|
| | (MHz) | (dBm) | (dBm) | (dB) | (dB) | (dB) | (dB) |
| 116 | 5580 | 9.17 | 1.45 | 0.22 | 7.50 | 13 | -5.50 |

Chain 1

| ĺ | Channel | Frequency | PK Level | PSD | DCCF | Peak Excursion | Limit | Margin |
|---|---------|-----------|----------|-------|------|----------------|-------|--------|
| | | (MHz) | (dBm) | (dBm) | (dB) | (dB) | (dB) | (dB) |
| | 116 | 5580 | 10.67 | 1.29 | 0.22 | 9.16 | 13 | -3.84 |

Chain 2

| ĺ | Channel | I Frequency PK Leve | | PSD | DCCF | Peak Excursion | Limit | Margin |
|---|---------|---------------------|-------|-------|------|----------------|-------|--------|
| | | (MHz) | (dBm) | (dBm) | (dB) | (dB) | (dB) | (dB) |
| | 116 | 5580 | 11.05 | 1.62 | 0.22 | 9.21 | 13 | -3.79 |