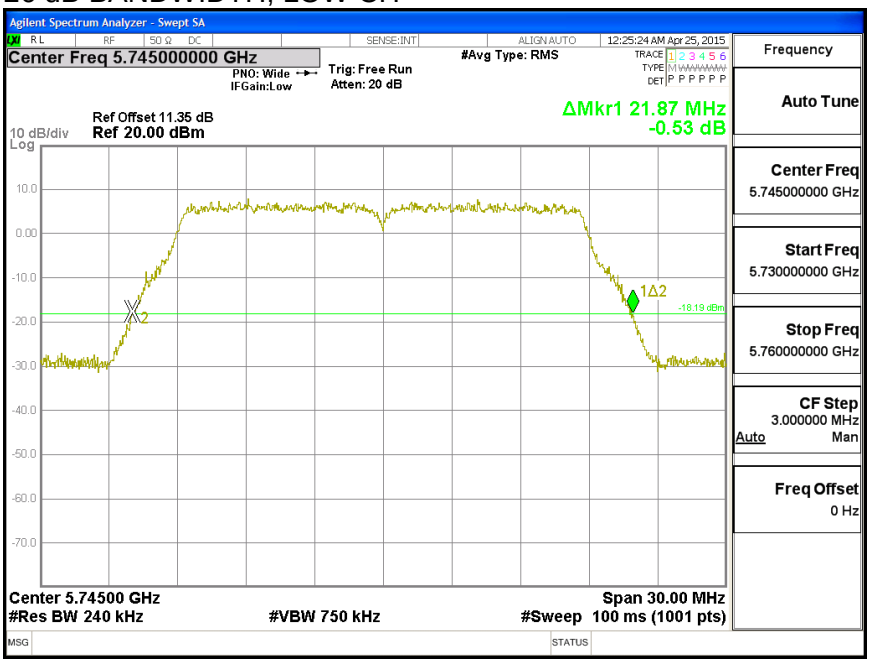
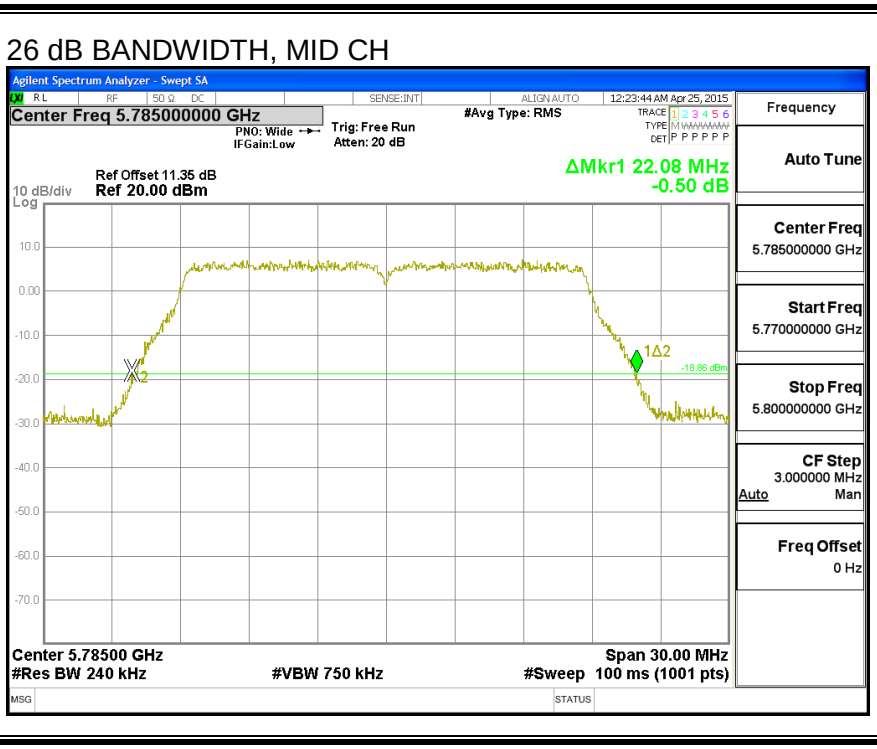
26 dB BANDWIDTH, CHAIN 0

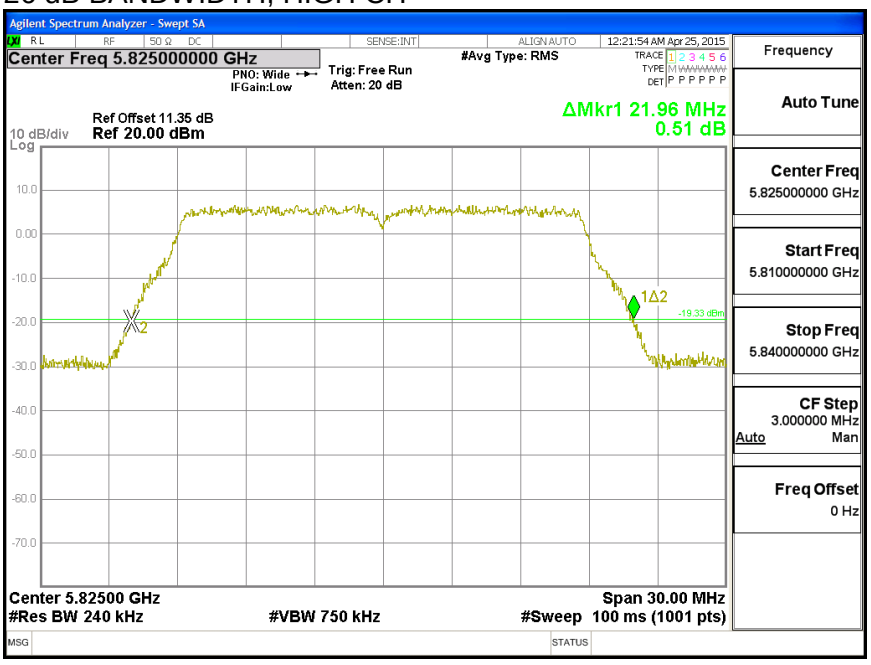
26 dB BANDWIDTH, LOW CH



26 dB BANDWIDTH, MID CH

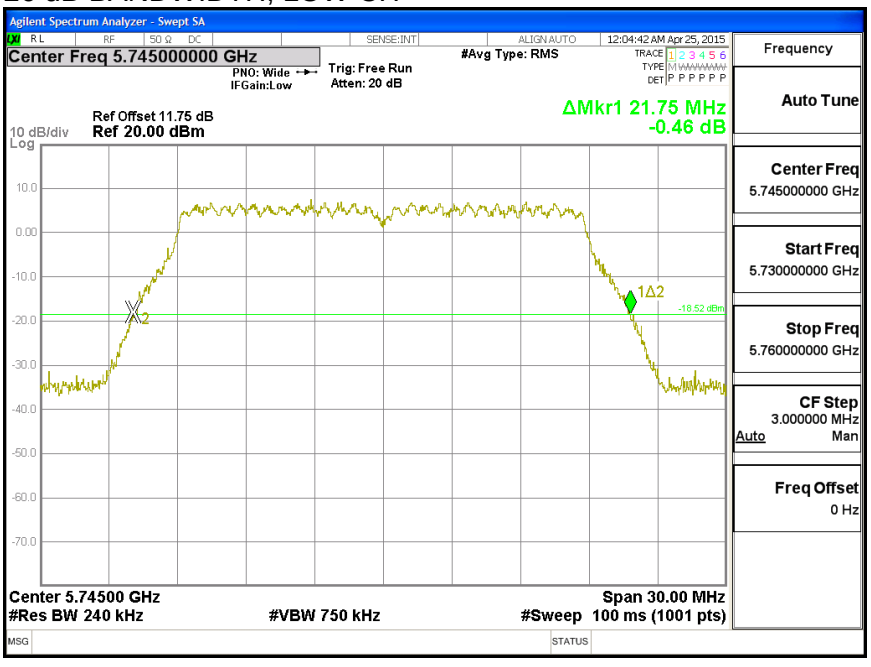


26 dB BANDWIDTH, HIGH CH

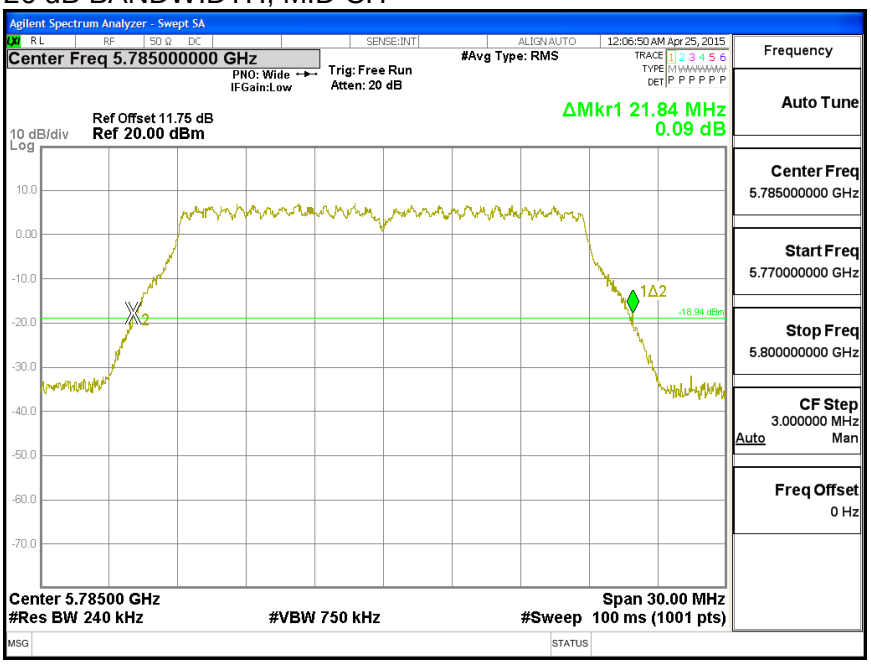


26 dB BANDWIDTH, CHAIN 1

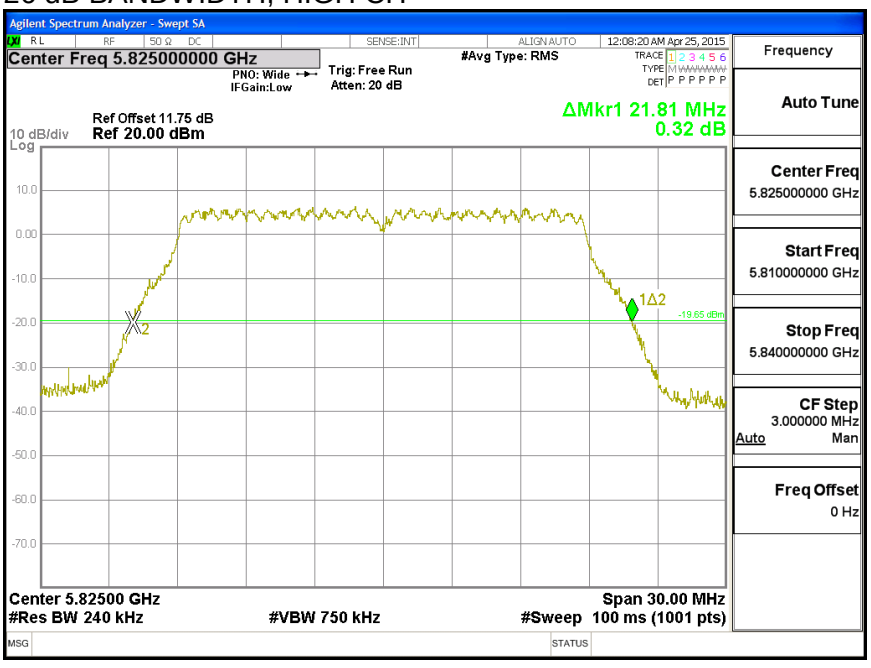
26 dB BANDWIDTH, LOW CH



26 dB BANDWIDTH, MID CH



26 dB BANDWIDTH, HIGH CH



8.39.3. 99% BANDWIDTH

LIMITS

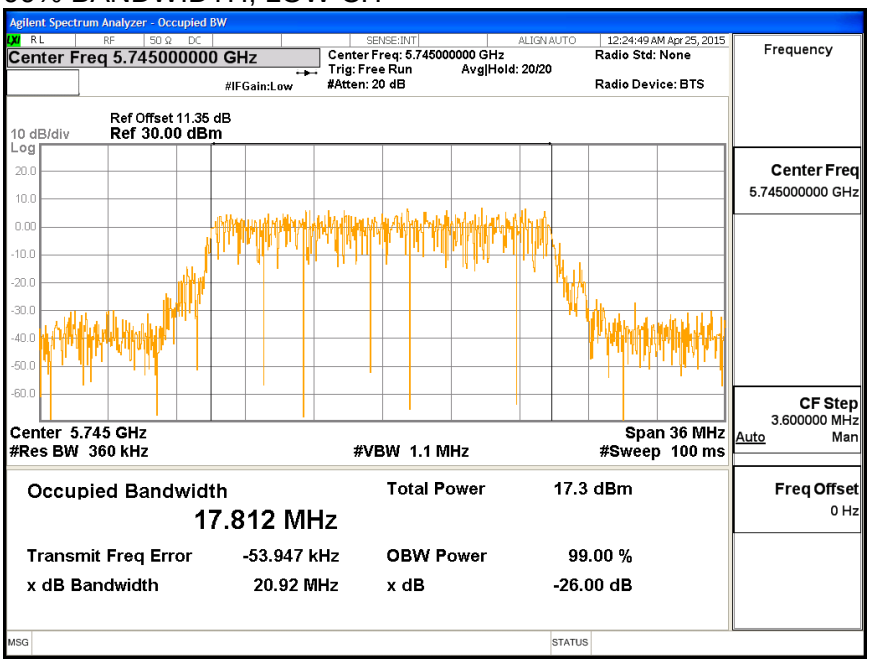
None; for reporting purposes only.

RESULTS

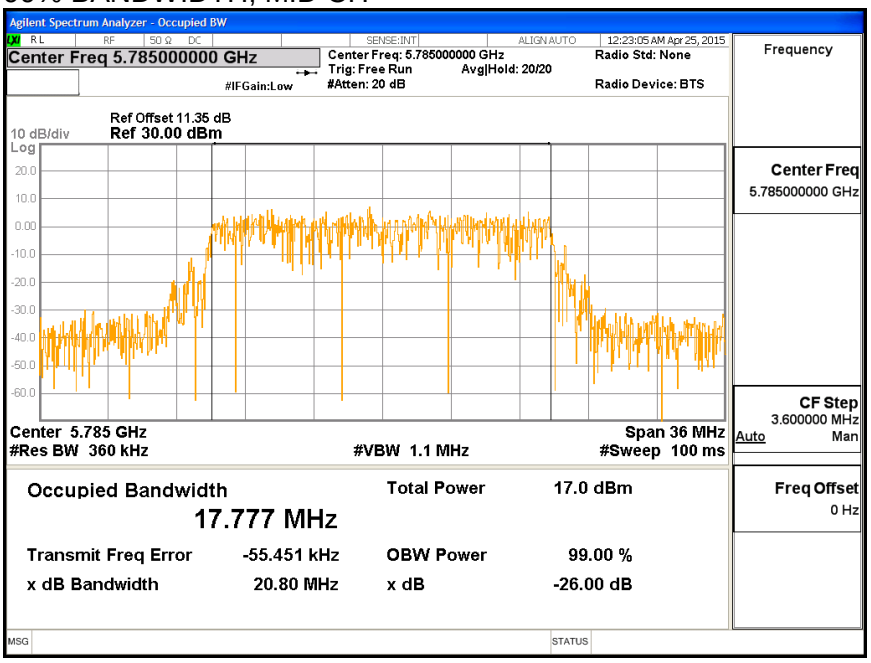
Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low	5745	17.812	17.822
Mid	5785	17.777	17.850
High	5825	17.802	17.867

99% BANDWIDTH, CHAIN 0

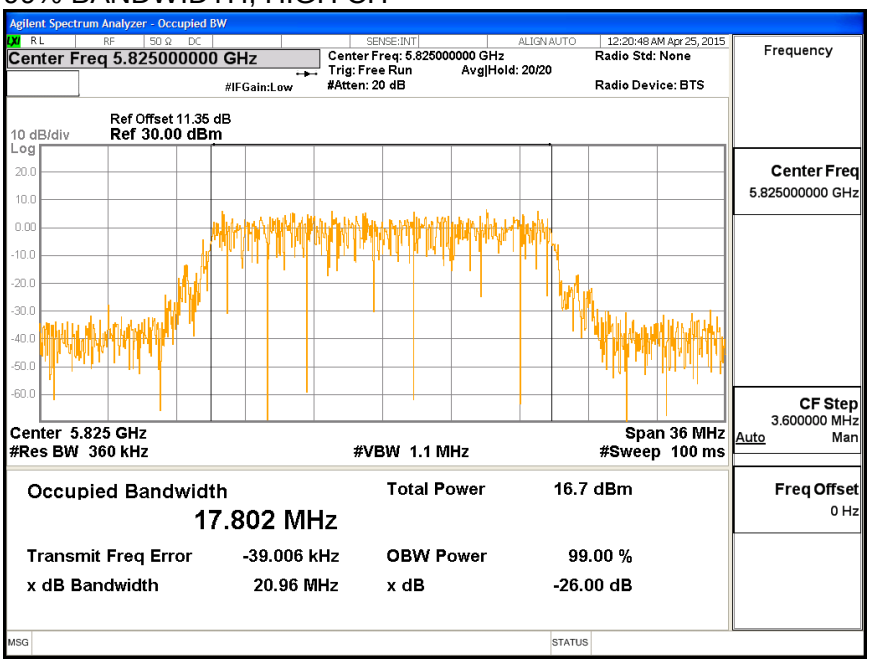
99% BANDWIDTH, LOW CH



99% BANDWIDTH, MID CH

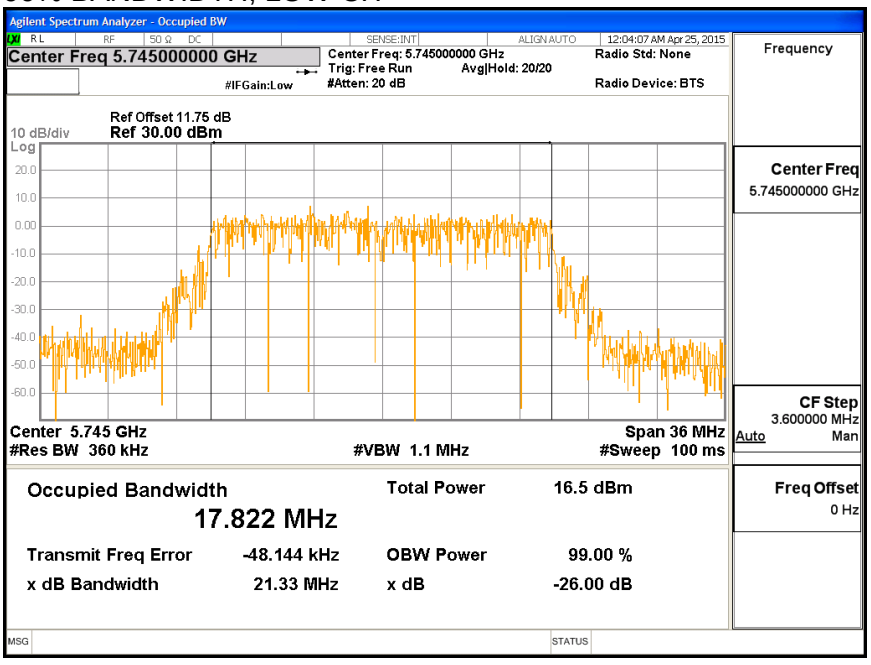


99% BANDWIDTH, HIGH CH

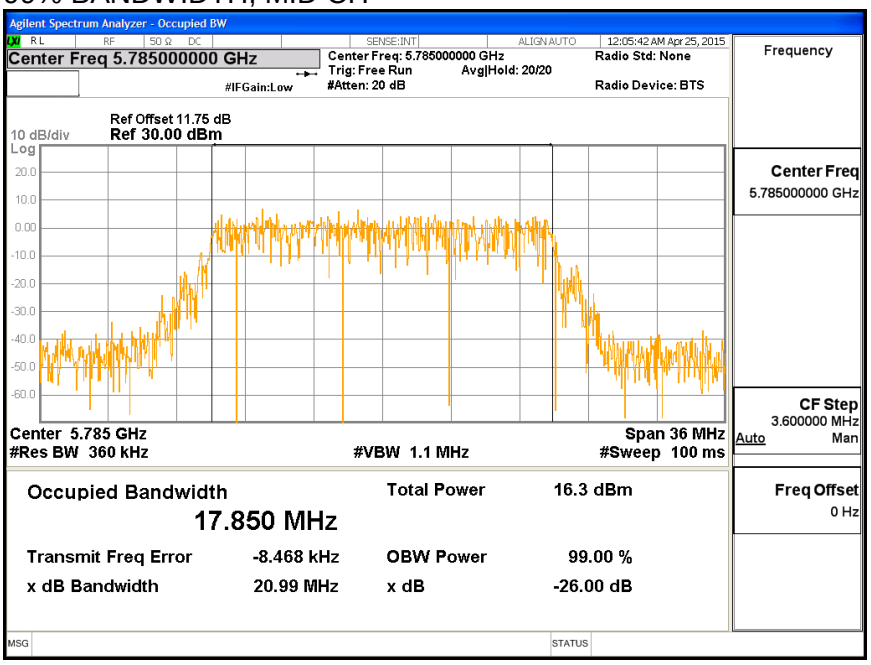


99% BANDWIDTH, CHAIN 1

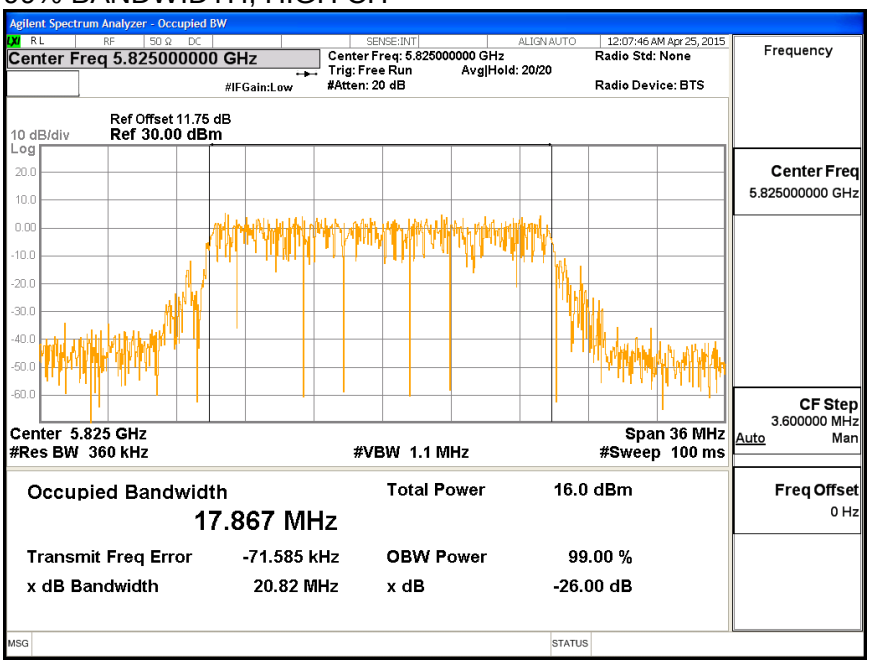
99% BANDWIDTH, LOW CH



99% BANDWIDTH, MID CH



99% BANDWIDTH, HIGH CH



8.39.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	Chain 0 Power (dBm)	Chain 1 Power (dBm)	Total Power (dBm)
Low	5745	15.90	15.92	18.92
Mid	5785	18.98	19.35	22.18
High	5825	16.88	16.91	19.91

8.39.5. OUTPUT POWER

LIMITS

FCC §15.407 (a) (3)

IC RSS-247 (6.2.4) (1)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum 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 unequal among the chains. The directional gain is:

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
-4.33	-1.00	-2.35

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Low	5745	-2.35	30.00
Mid	5785	-2.35	30.00
High	5825	-2.35	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	15.90	15.92	18.92	30.00	-11.08
Mid	5785	18.98	19.35	22.18	30.00	-7.82
High	5825	16.88	16.91	19.91	30.00	-10.09

8.39.6. PSD

LIMITS

FCC §15.407 (a) (3)

IC RSS-247 (6.2.4) (1)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum 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 unequal among the chains. The directional gain is:

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
-4.33	-1.00	0.50

RESULTS

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5745	0.50	30.00
Mid	5785	0.50	30.00
High	5825	0.50	30.00

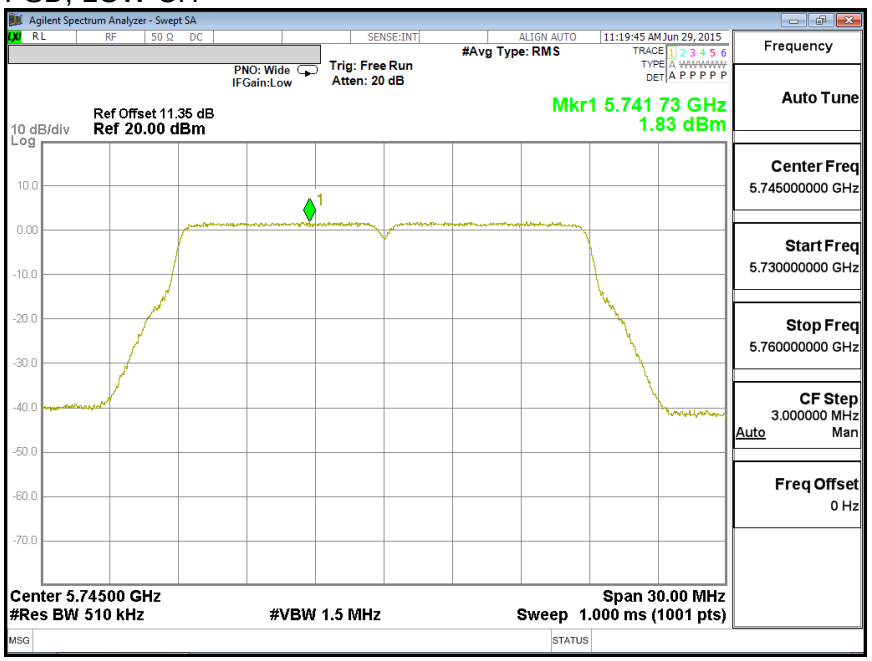
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

PSD Results

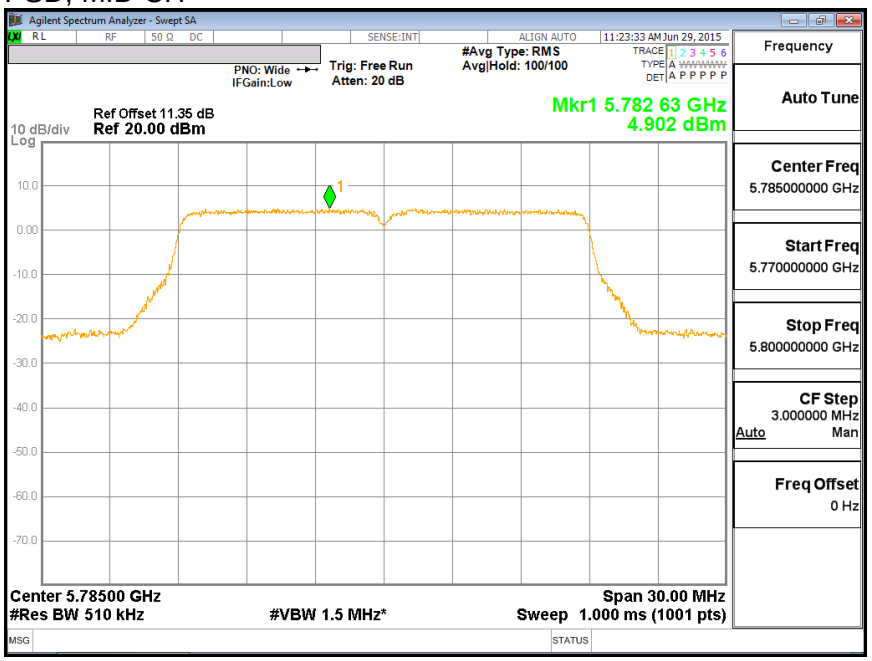
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5745	1.83	1.86	4.86	30.00	-25.14
Mid	5785	4.90	5.21	8.07	30.00	-21.93
High	5825	2.87	2.93	5.91	30.00	-24.09

PSD,

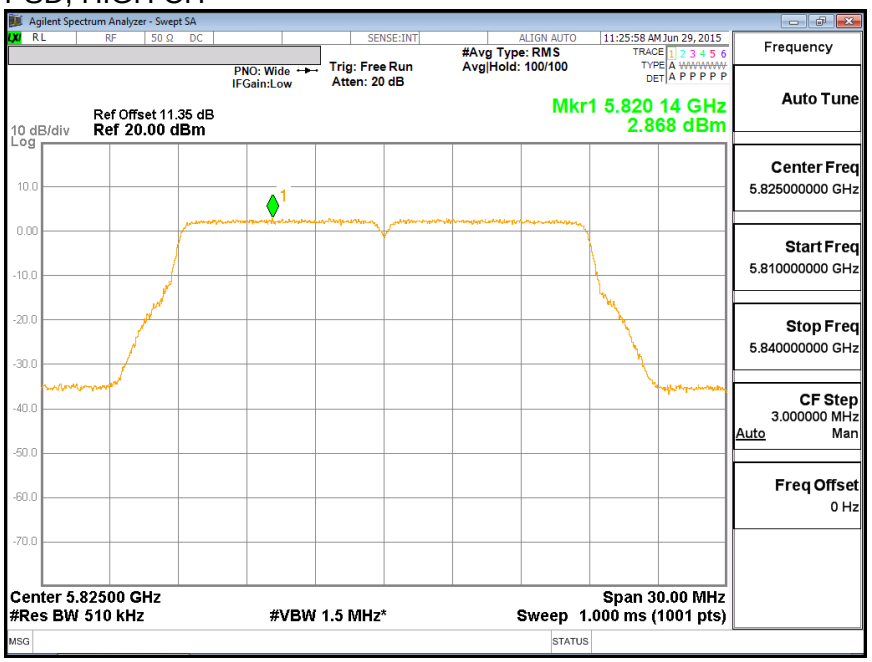
PSD, LOW CH



PSD, MID CH

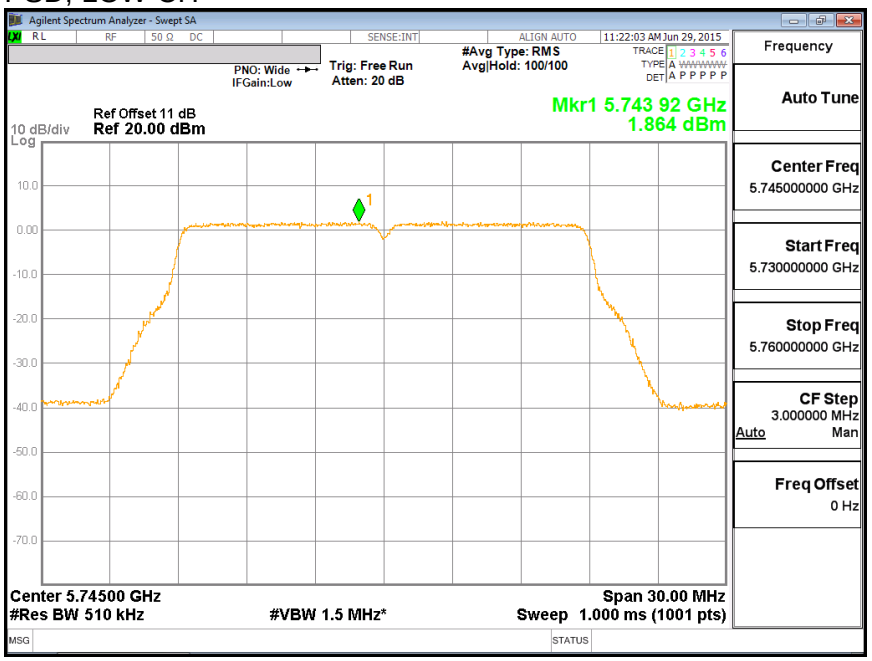


PSD, HIGH CH

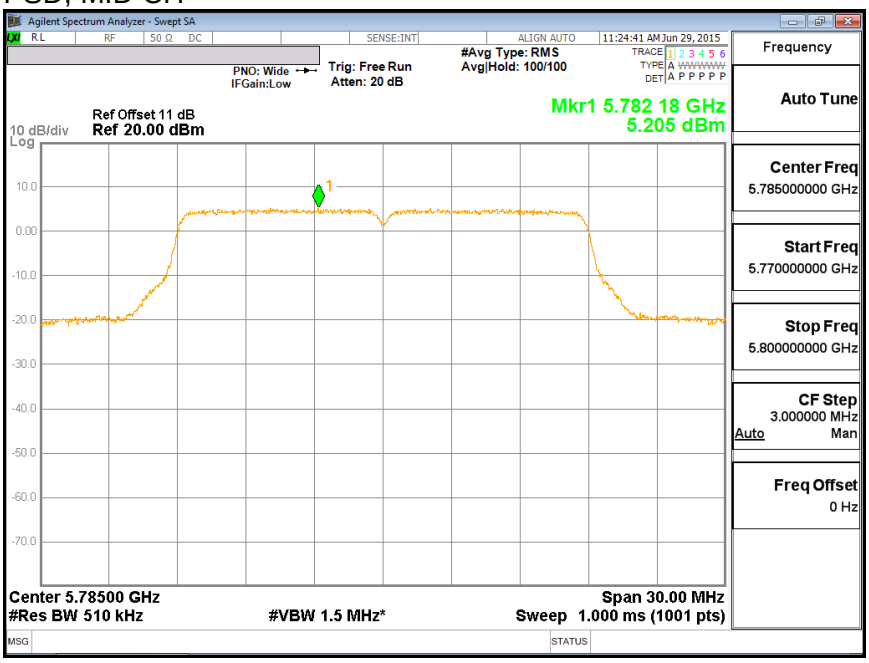


PSD, CHAIN 1

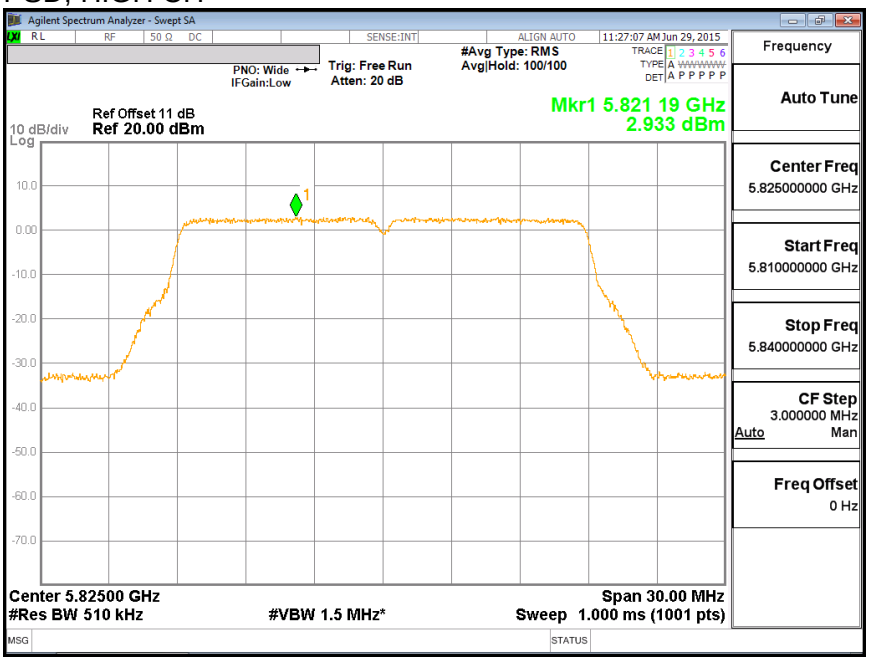
PSD, LOW CH



PSD, MID CH



PSD, HIGH CH



8.40. 802.11n HT20 2Tx STBC MODE IN THE 5.8 GHz BAND

Note: Covered by 802.11n HT20 2Tx CDD MODE

8.41. 802.11n HT40 CHAIN 0 MODE IN THE 5.8 GHz BAND

8.41.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

IC RSS-247 (6.2.4) (1)

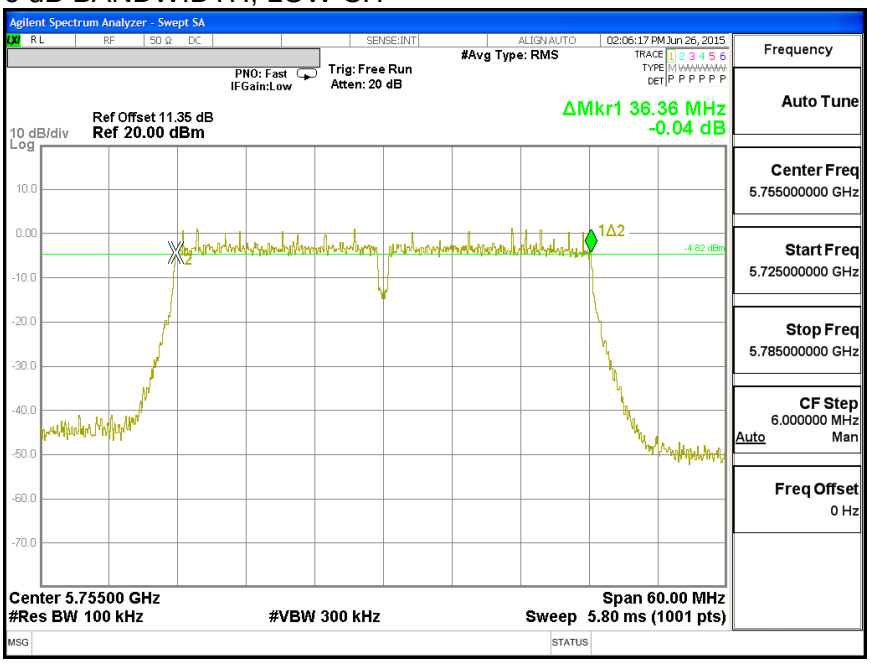
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

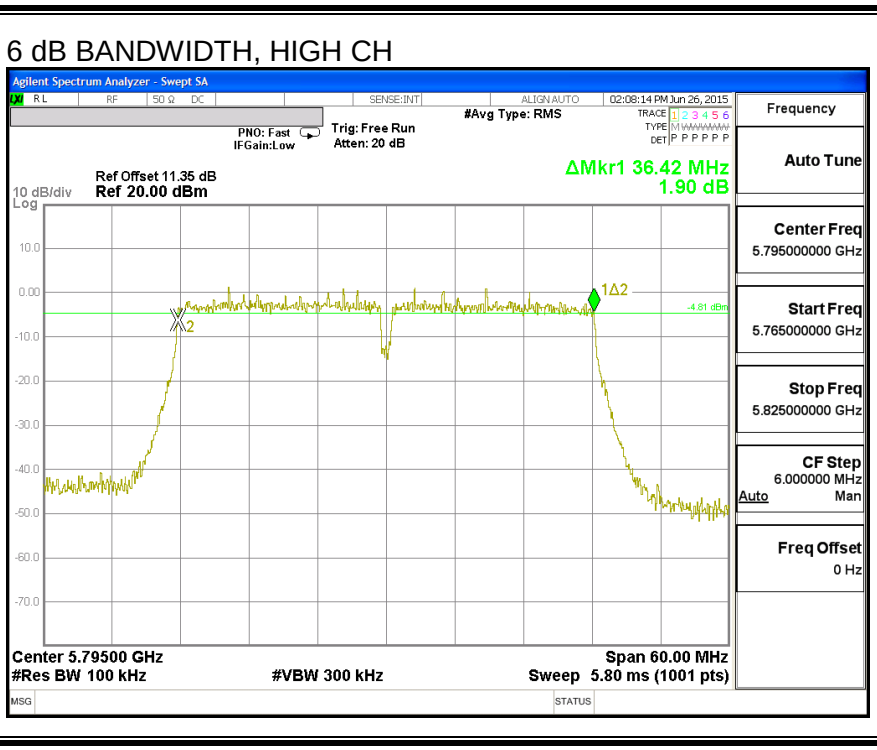
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5755	36.36	0.5
High	5795	36.42	0.5

6 dB BANDWIDTH

6 dB BANDWIDTH, LOW CH



6 dB BANDWIDTH, HIGH CH



8.41.2. 26 dB BANDWIDTH

LIMITS

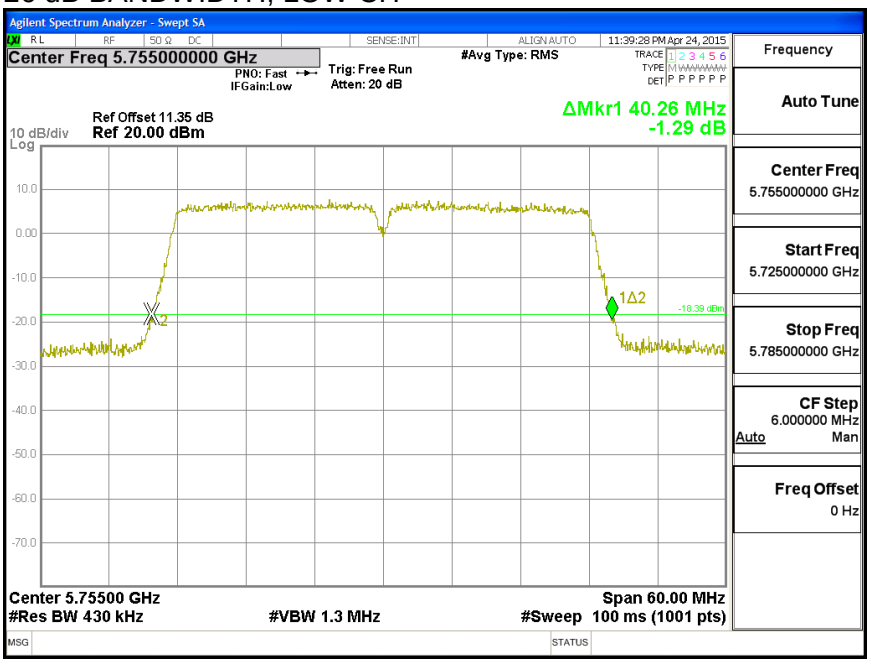
None, for reporting purposes only.

RESULTS

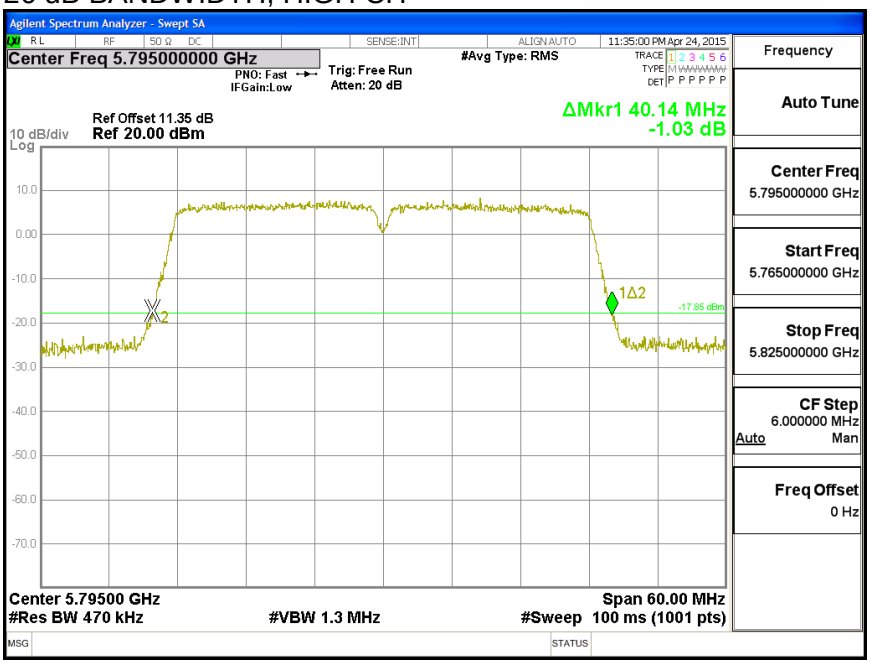
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5755	40.26
High	5795	40.14

26 dB BANDWIDTH

26 dB BANDWIDTH, LOW CH



26 dB BANDWIDTH, HIGH CH



8.41.3. 99% BANDWIDTH

LIMITS

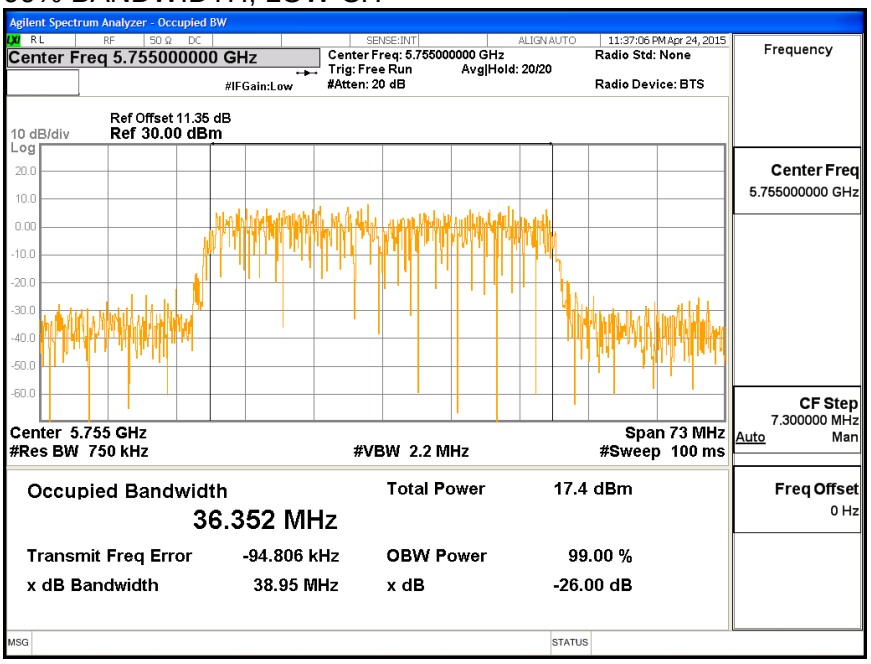
None; for reporting purposes only.

RESULTS

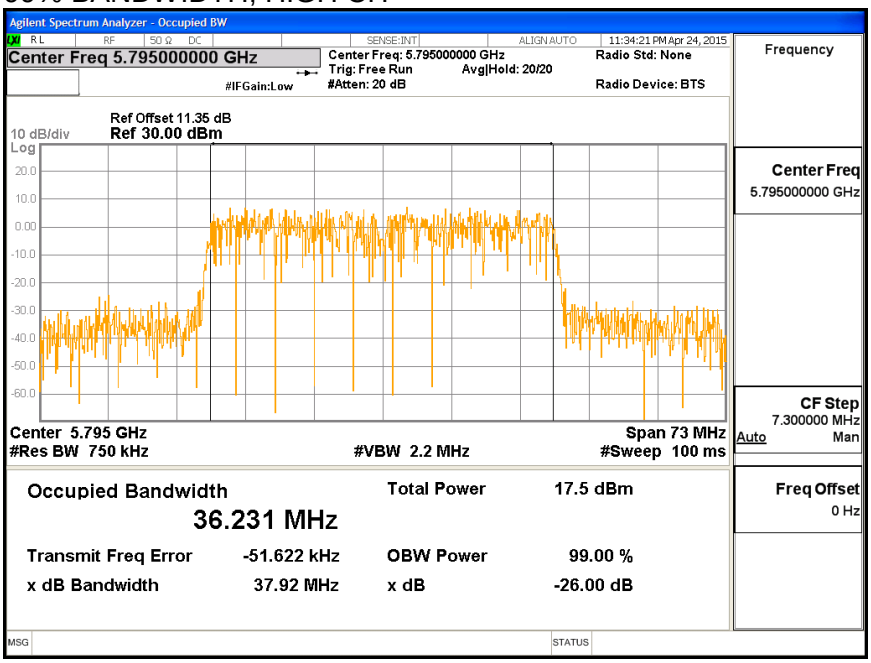
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5755	36.352
High	5795	36.231

99% BANDWIDTH

99% BANDWIDTH, LOW CH



99% BANDWIDTH, HIGH CH



8.41.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Low	5755	14.96
High	5795	17.97

8.41.5. OUTPUT POWER

LIMITS

FCC §15.407 (a) (3)

IC RSS-247 (6.2.4) (1)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum 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.

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Low	5755	-4.33	30.00
High	5795	-4.33	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	14.96	14.96	30.00	-15.04
High	5795	17.97	17.97	30.00	-12.03

8.41.6. PSD

LIMITS

FCC §15.407 (a) (3)

IC RSS-247 (6.2.4) (1)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum 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.

RESULTS

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5755	-4.33	30.00
High	5795	-4.33	30.00

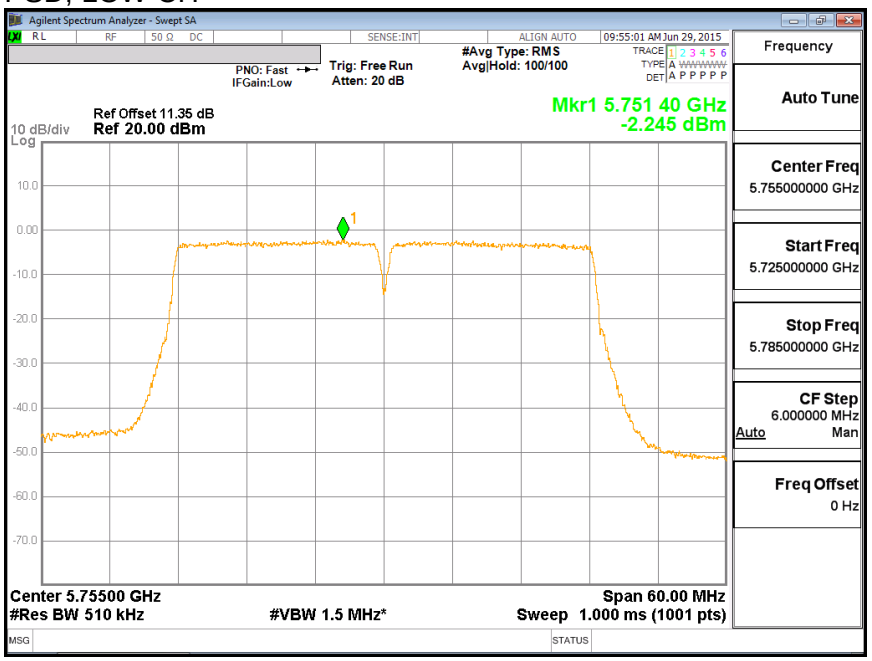
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD

PSD Results

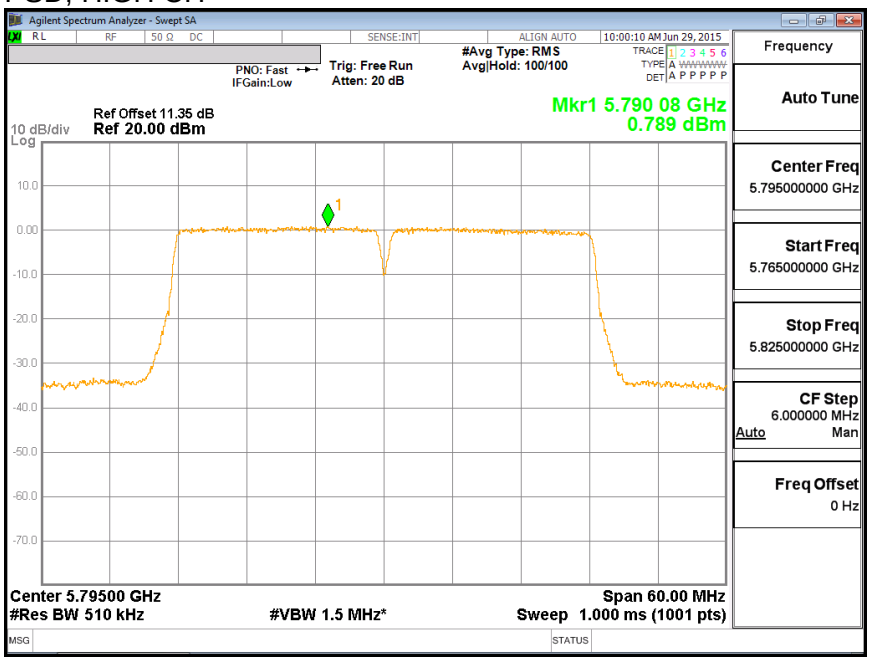
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5755	-2.25	-2.25	30.00	-32.25
High	5795	0.79	0.79	30.00	-29.21

PSD,

PSD, LOW CH



PSD, HIGH CH



8.42. 802.11n HT40 CHAIN 1 MODE IN THE 5.8 GHz BAND

8.42.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

IC RSS-247 (6.2.4) (1)

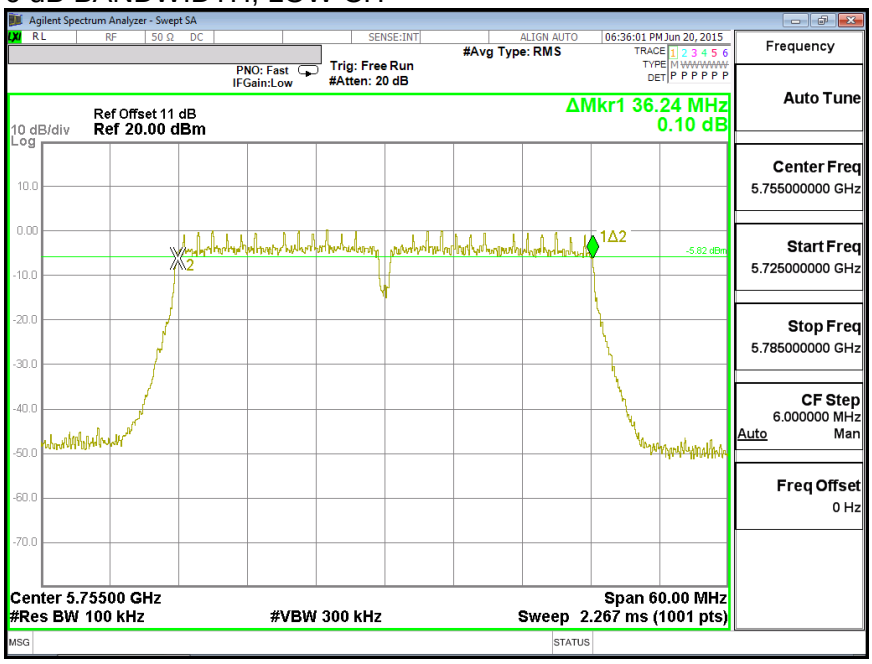
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

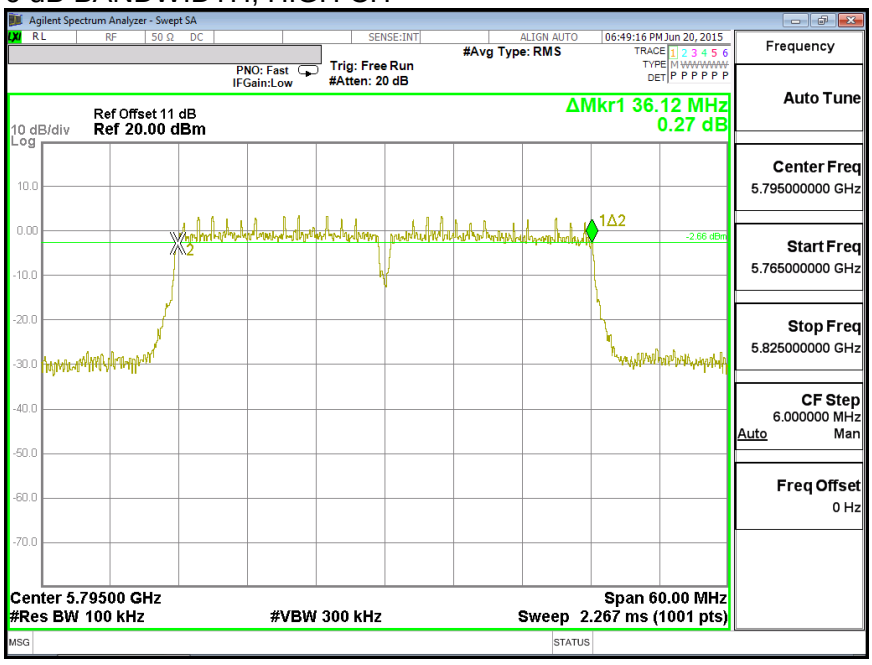
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5755	36.24	0.5
High	5795	36.12	0.5

6 dB BANDWIDTH

6 dB BANDWIDTH, LOW CH



6 dB BANDWIDTH, HIGH CH



8.42.2. 26 dB BANDWIDTH

LIMITS

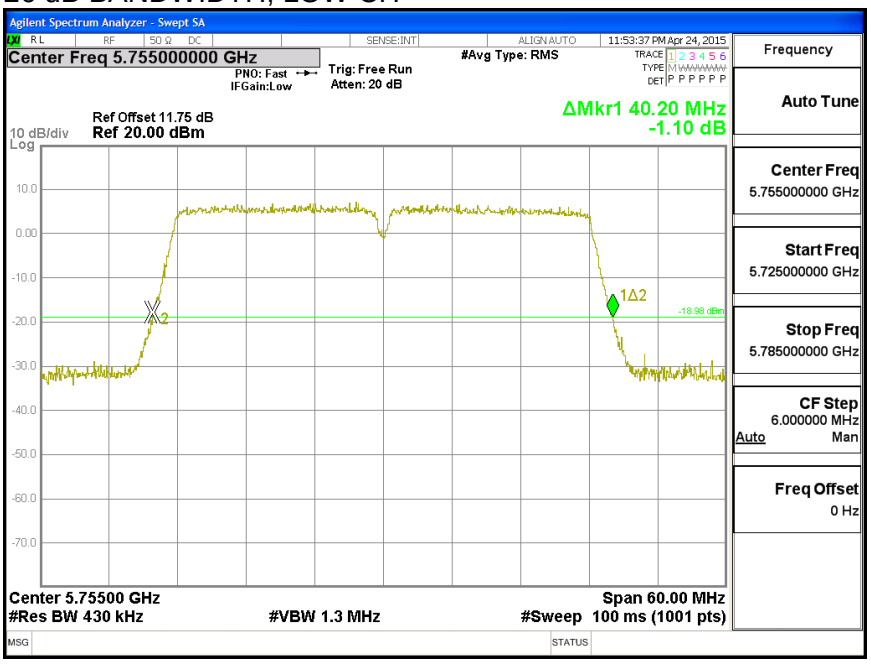
None, for reporting purposes only.

RESULTS

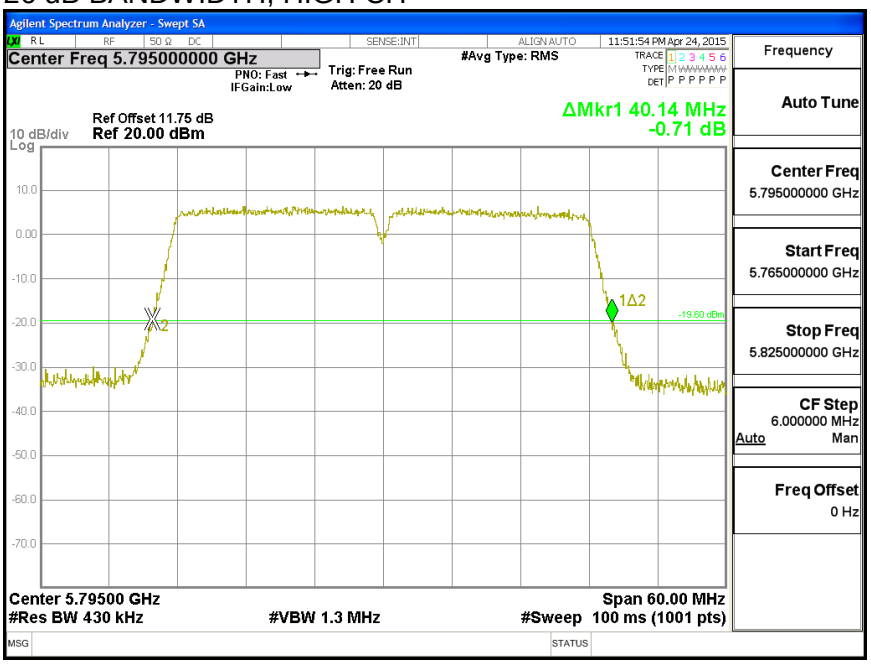
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5755	40.20
High	5795	40.14

26 dB BANDWIDTH

26 dB BANDWIDTH, LOW CH



26 dB BANDWIDTH, HIGH CH



8.42.3. 99% BANDWIDTH

LIMITS

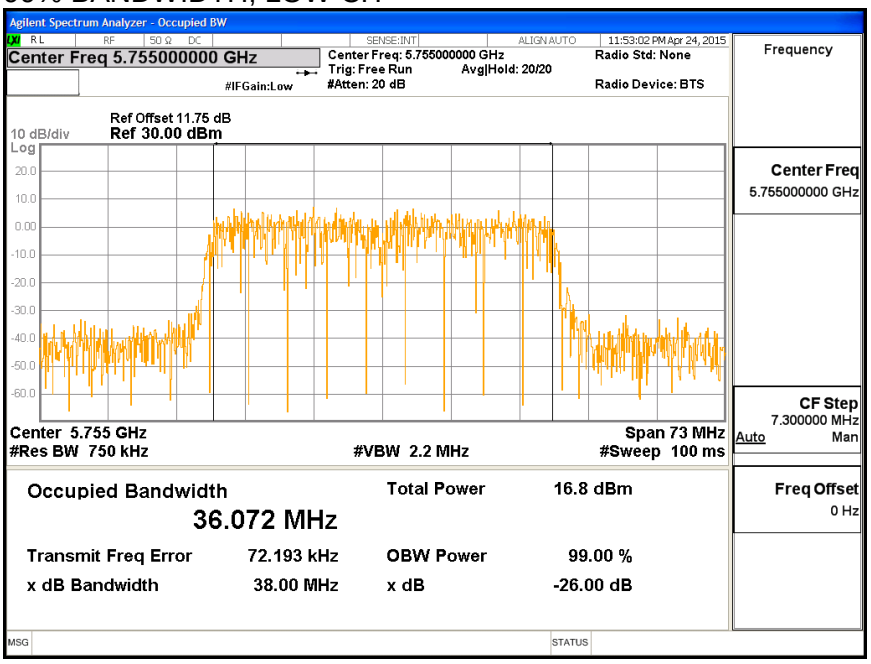
None; for reporting purposes only.

RESULTS

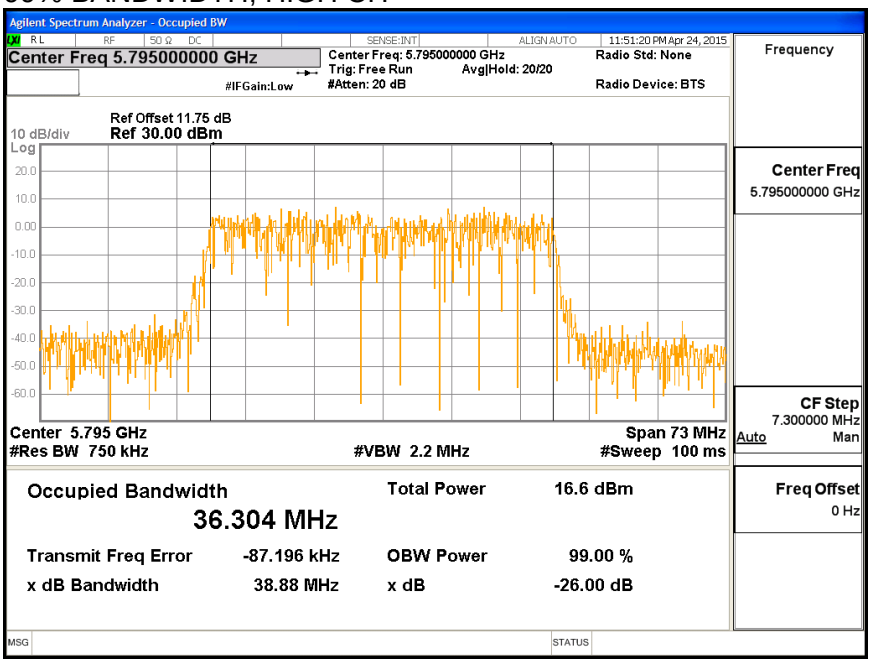
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5755	36.072
High	5795	36.304

99% BANDWIDTH

99% BANDWIDTH, LOW CH



99% BANDWIDTH, HIGH CH



8.42.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Low	5755	14.98
High	5795	17.95

8.42.5. OUTPUT POWER

LIMITS

FCC §15.407 (a) (3)

IC RSS-247 (6.2.4) (1)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum 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.

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Low	5755	-1.00	30.00
High	5795	-1.00	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power

Output Power Results

Channel	Frequency (MHz)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	14.98	14.98	30.00	-15.02
High	5795	17.95	17.95	30.00	-12.05

8.42.6. PSD

LIMITS

FCC §15.407 (a) (3)

IC RSS-247 (6.2.4) (1)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum 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.

RESULTS

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5755	-1.00	30.00
High	5795	-1.00	30.00

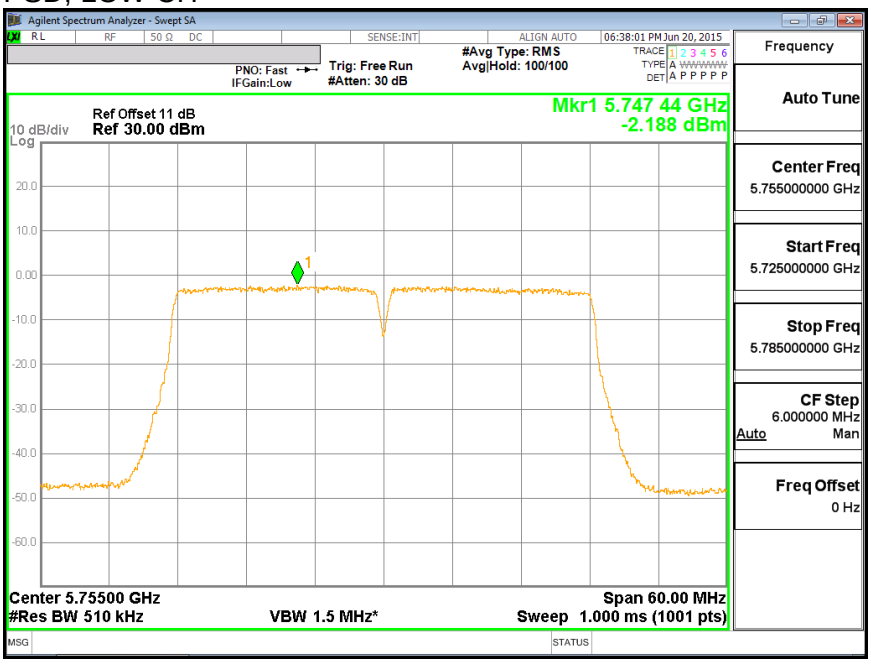
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD

PSD Results

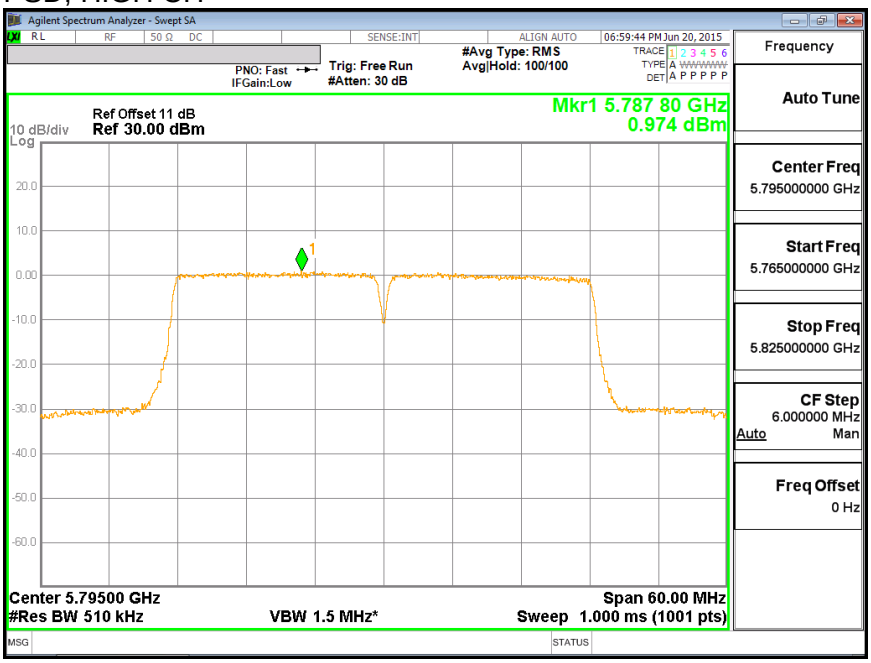
Channel	Frequency (MHz)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5755	-2.19	-2.19	30.00	-32.19
High	5795	0.97	0.97	30.00	-29.03

PSD,

PSD, LOW CH



PSD, HIGH CH



8.43. 802.11n HT40 2Tx CDD MODE IN THE 5.8 GHz BAND

8.43.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

IC RSS-247 (6.2.4) (1)

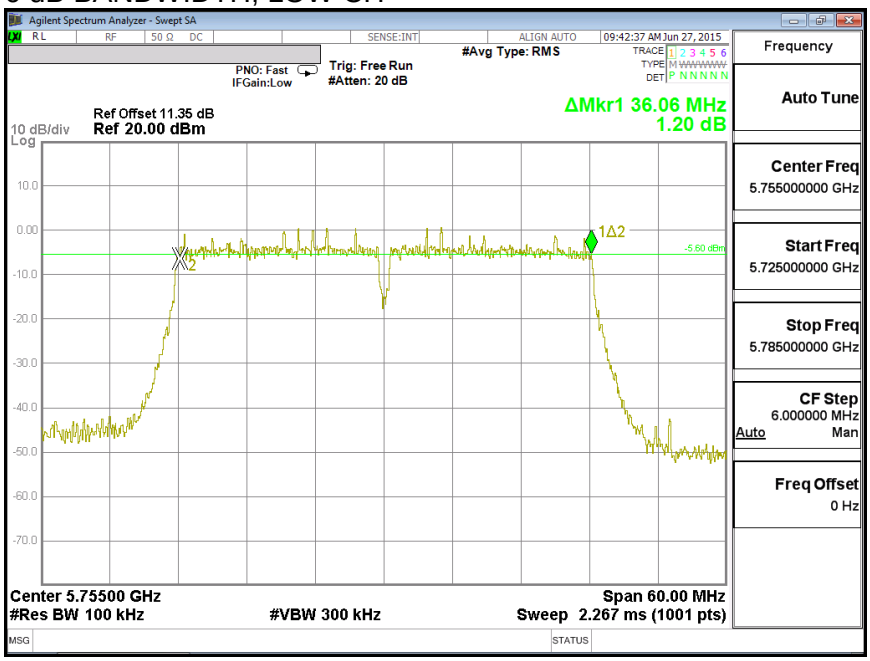
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

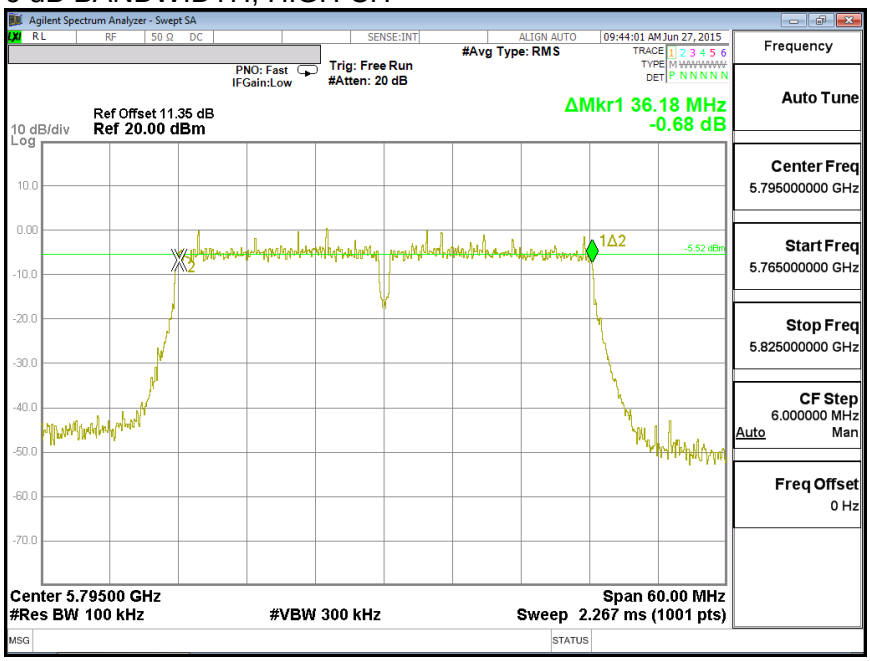
Channel	Frequency (MHz)	6 dB BW Chain 0 (MHz)	6 dB BW Chain 1 (MHz)	Minimum Limit (MHz)
Low	5755	36.06	36.24	0.5
High	5795	36.18	36.30	0.5

6 dB BANDWIDTH, CHAIN 0

6 dB BANDWIDTH, LOW CH

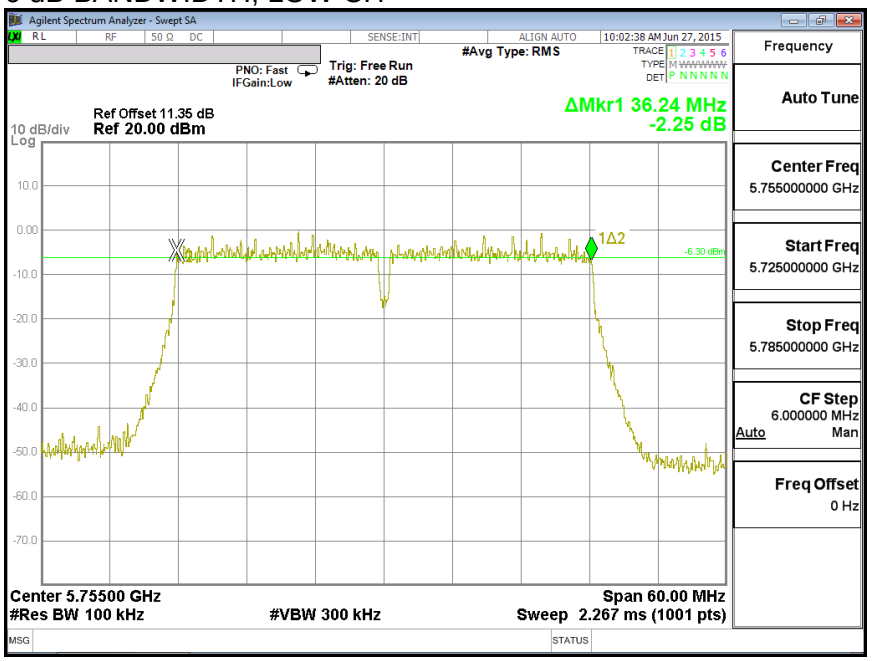


6 dB BANDWIDTH, HIGH CH

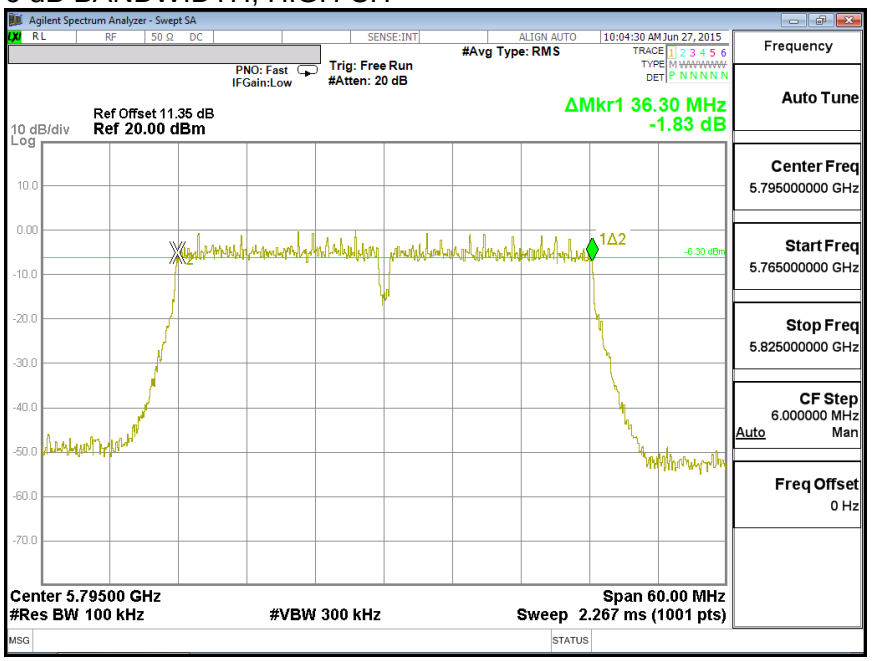


6 dB BANDWIDTH, CHAIN 1

6 dB BANDWIDTH, LOW CH



6 dB BANDWIDTH, HIGH CH



8.43.2. 26 dB BANDWIDTH

LIMITS

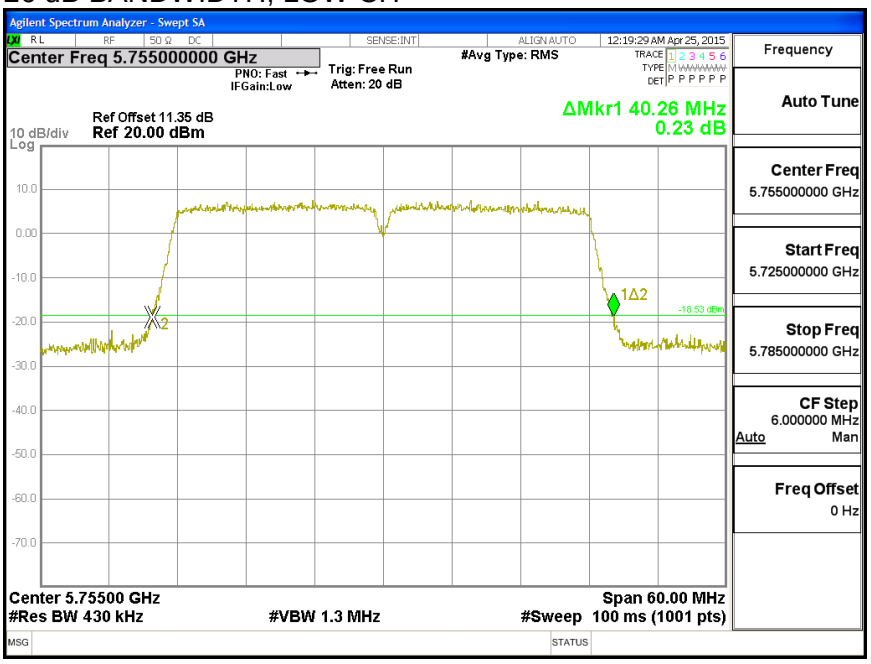
None, for reporting purposes only.

RESULTS

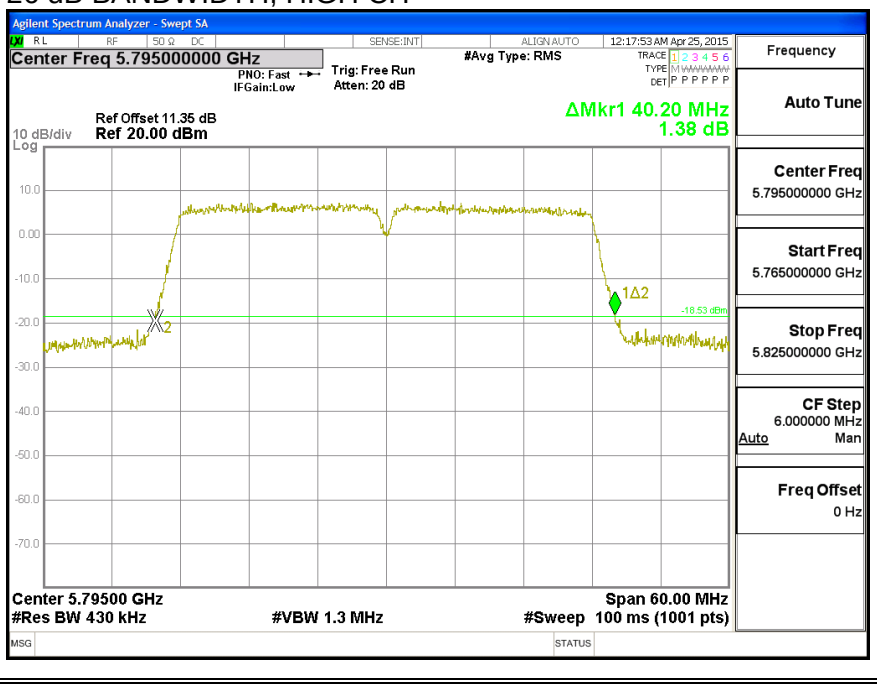
Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)
Low	5755	40.26	39.72
High	5795	40.20	39.90

26 dB BANDWIDTH, CHAIN 0

26 dB BANDWIDTH, LOW CH

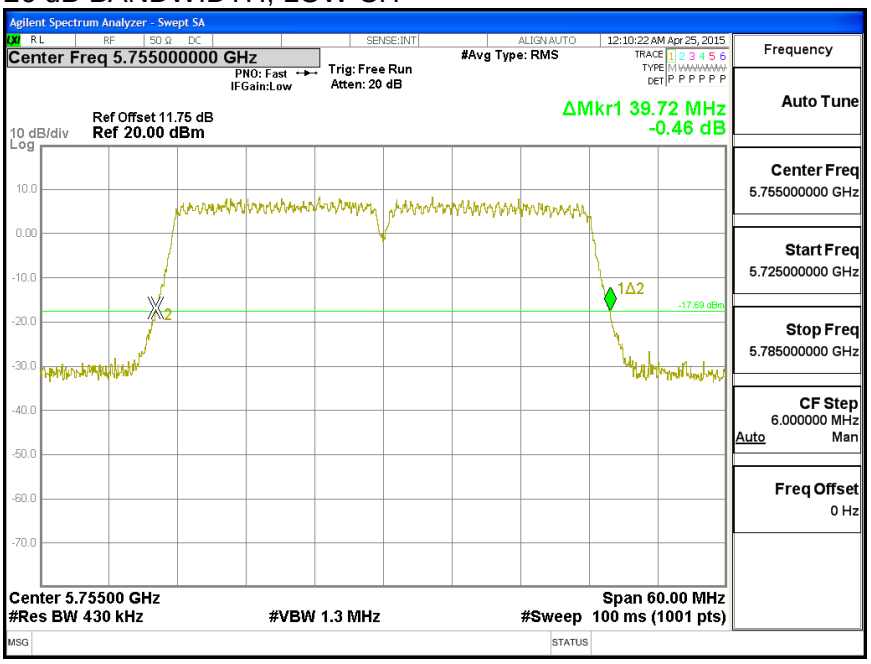


26 dB BANDWIDTH, HIGH CH

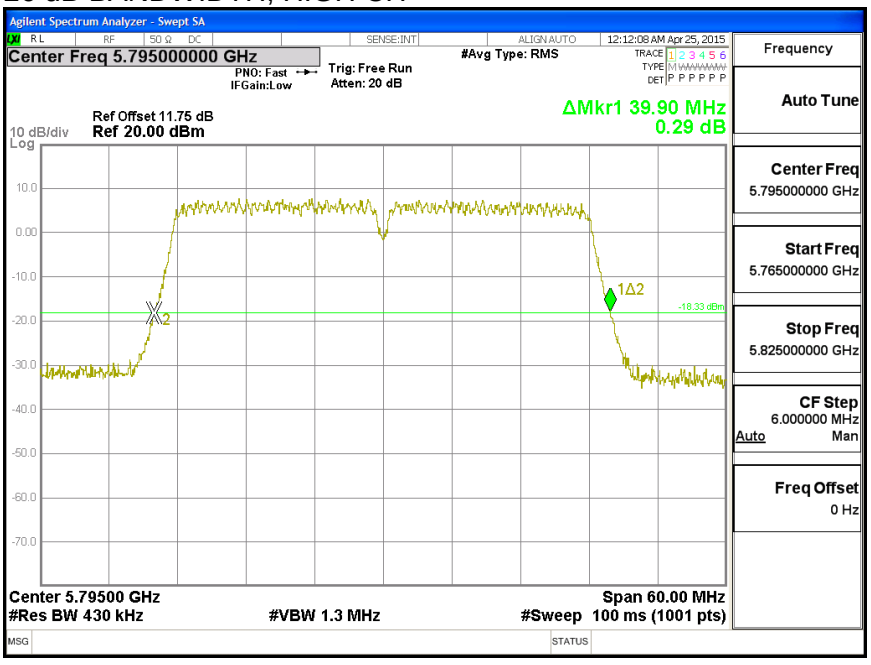


26 dB BANDWIDTH, CHAIN 1

26 dB BANDWIDTH, LOW CH



26 dB BANDWIDTH, HIGH CH



8.43.3. 99% BANDWIDTH

LIMITS

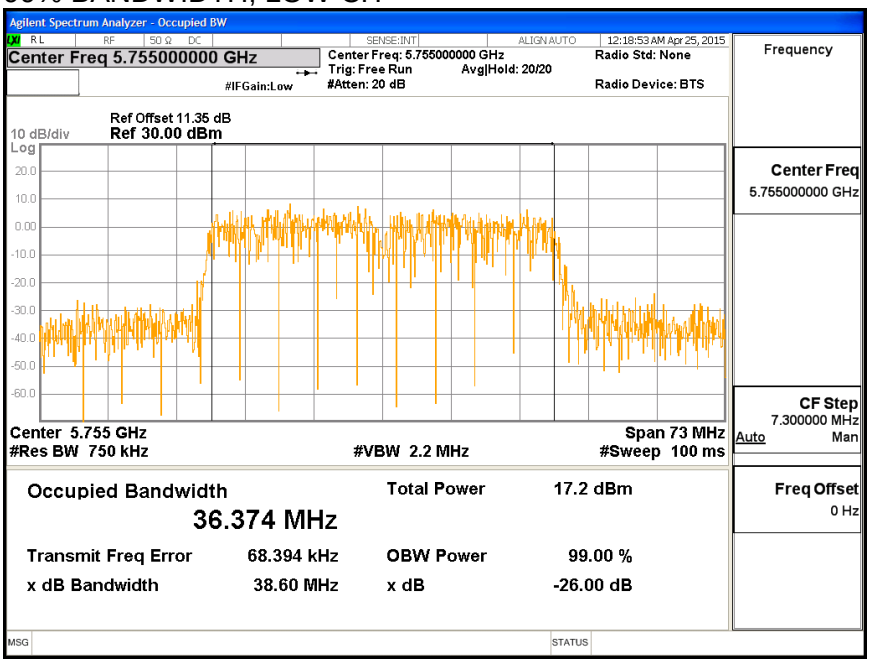
None; for reporting purposes only.

RESULTS

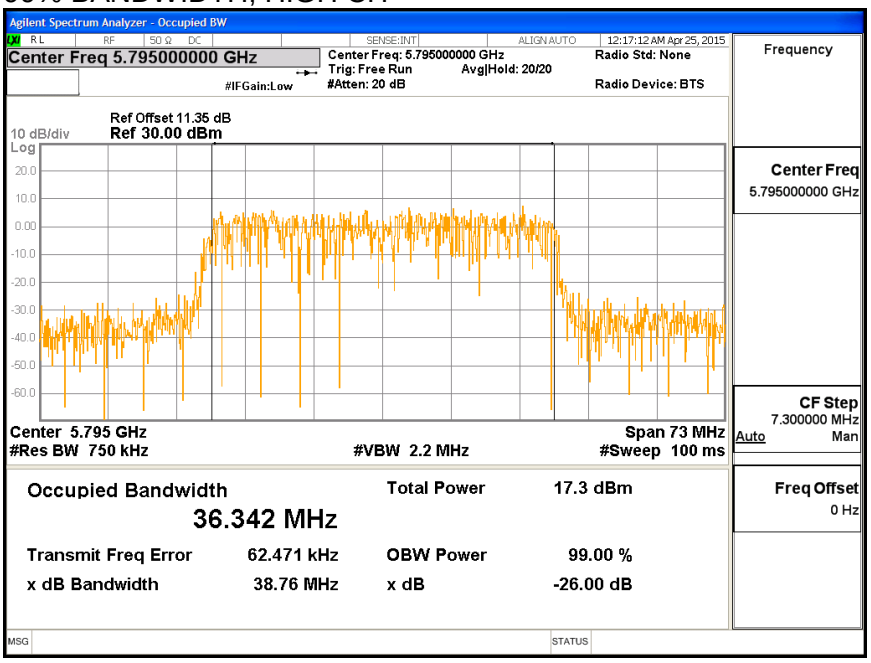
Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low	5755	36.374	36.352
High	5795	36.342	36.198

99% BANDWIDTH, CHAIN 0

99% BANDWIDTH, LOW CH

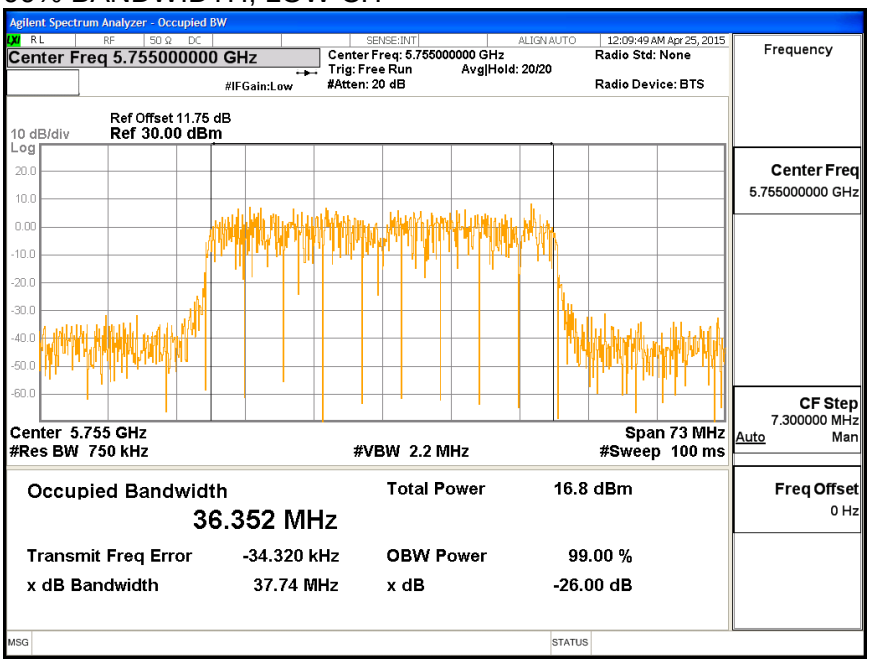


99% BANDWIDTH, HIGH CH

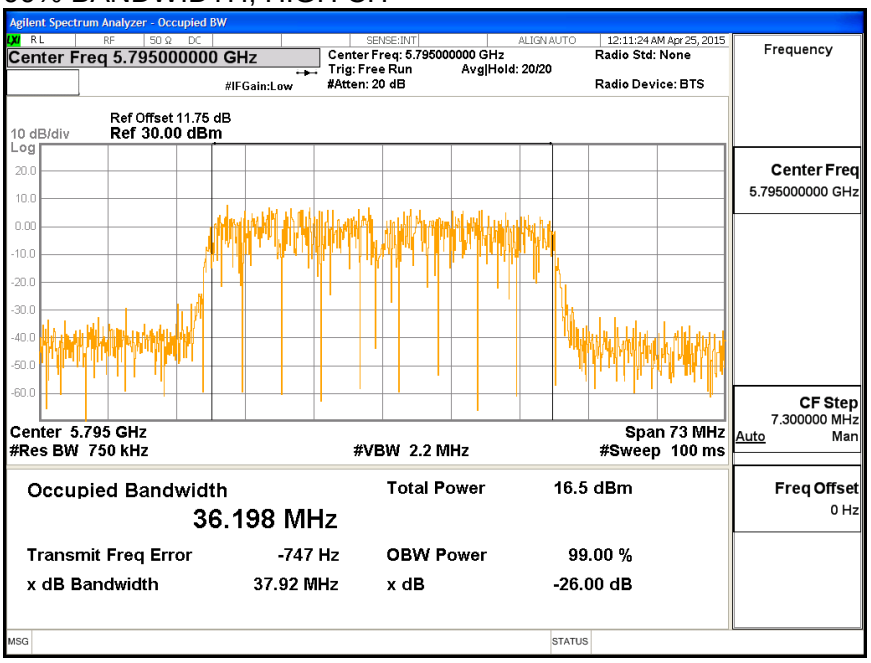


99% BANDWIDTH, CHAIN 1

99% BANDWIDTH, LOW CH



99% BANDWIDTH, HIGH CH



8.43.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	Chain 0 Power (dBm)	Chain 1 Power (dBm)	Total Power (dBm)
Low	5755	15.00	14.92	17.97
High	5795	16.94	16.96	19.96

8.43.5. OUTPUT POWER

LIMITS

FCC §15.407 (a) (3)

IC RSS-247 (6.2.4) (1)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum 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 unequal among the chains. The directional gain is:

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
-4.33	-1.00	-2.35

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Low	5755	-2.35	30.00
High	5795	-2.35	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	15.00	14.92	17.97	30.00	-12.03
High	5795	16.94	16.96	19.96	30.00	-10.04

8.43.6. PSD

LIMITS

FCC §15.407 (a) (3)

IC RSS-247 (6.2.4) (1)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum 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 unequal among the chains. The directional gain is:

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
-4.33	-1.00	0.50

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5755	0.50	30.00
High	5795	0.50	30.00

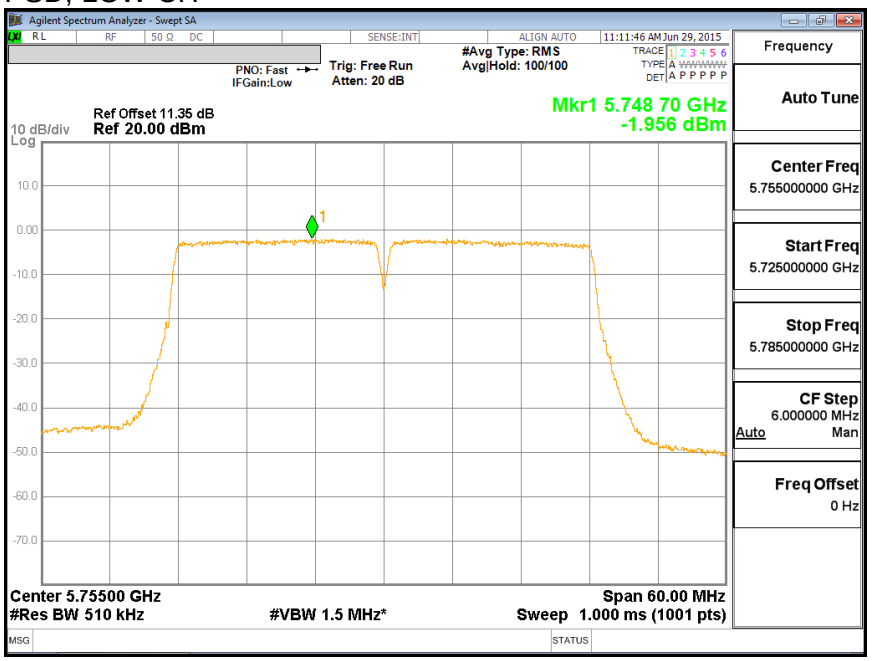
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD

PSD Results

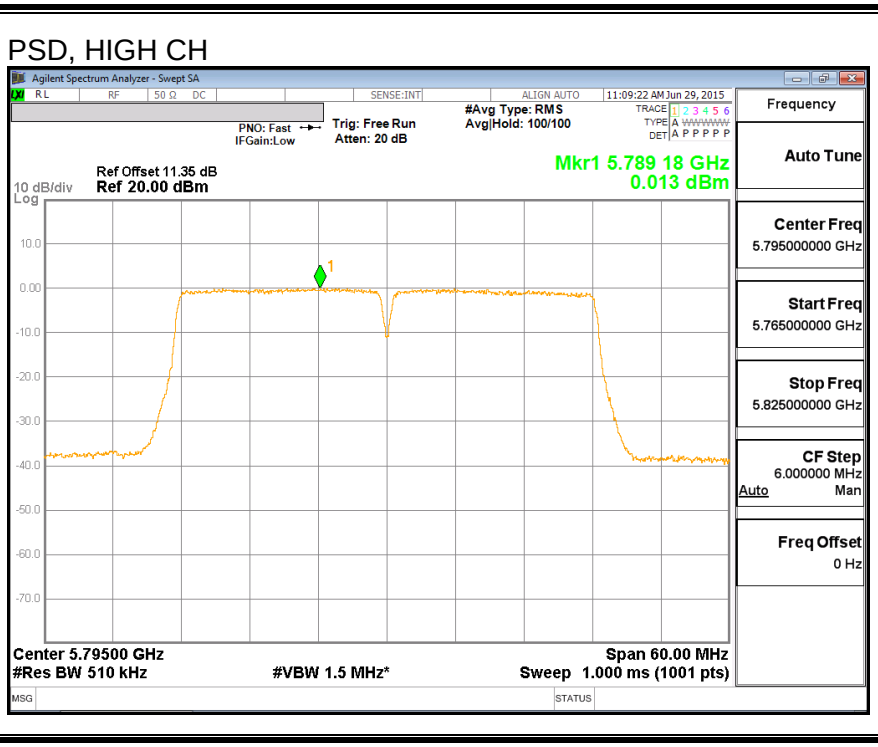
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5755	-1.96	-2.05	1.01	30.00	-28.99
High	5795	0.01	0.20	3.12	30.00	-26.88

PSD,

PSD, LOW CH

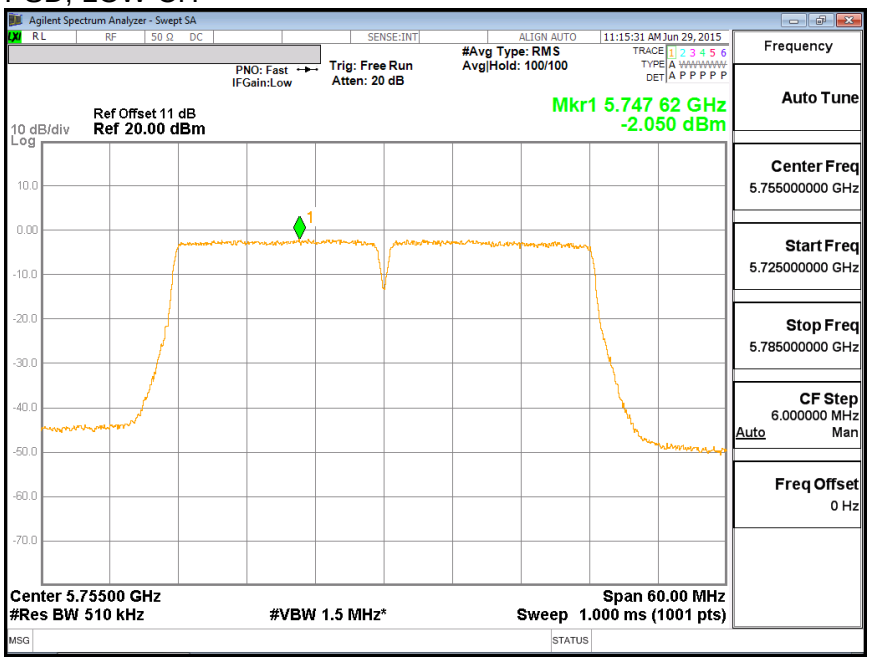


PSD, HIGH CH

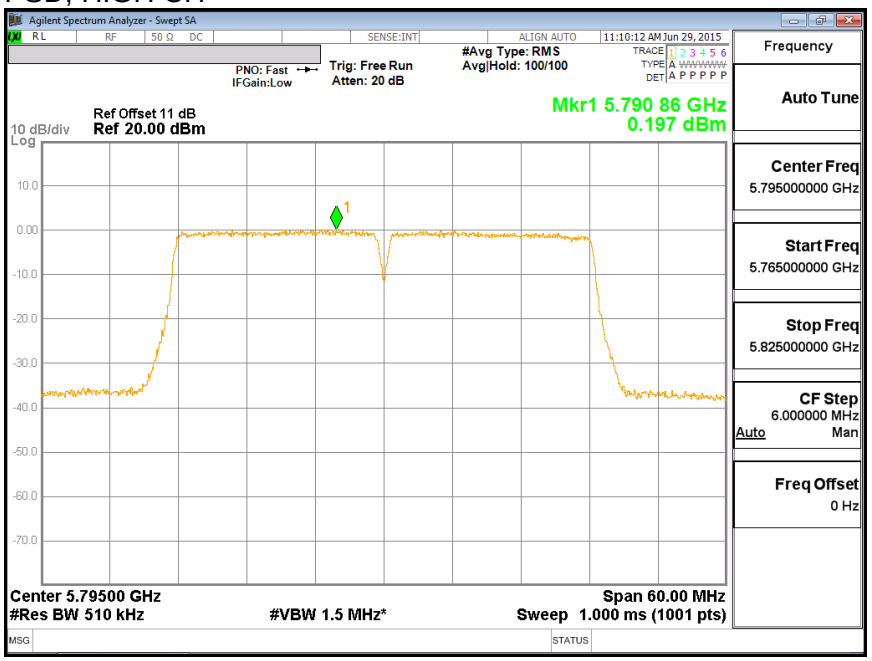


PSD, CHAIN 1

PSD, LOW CH



PSD, HIGH CH



8.44. 802.11n HT40 2Tx STBC MODE IN THE 5.8 GHz BAND

Note: Covered by 802.11n HT40 2Tx CDD MODE

8.45. 802.11ac VHT80 CHAIN 0 MODE IN THE 5.8 GHz BAND

8.45.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

IC RSS-247 (6.2.4) (1)

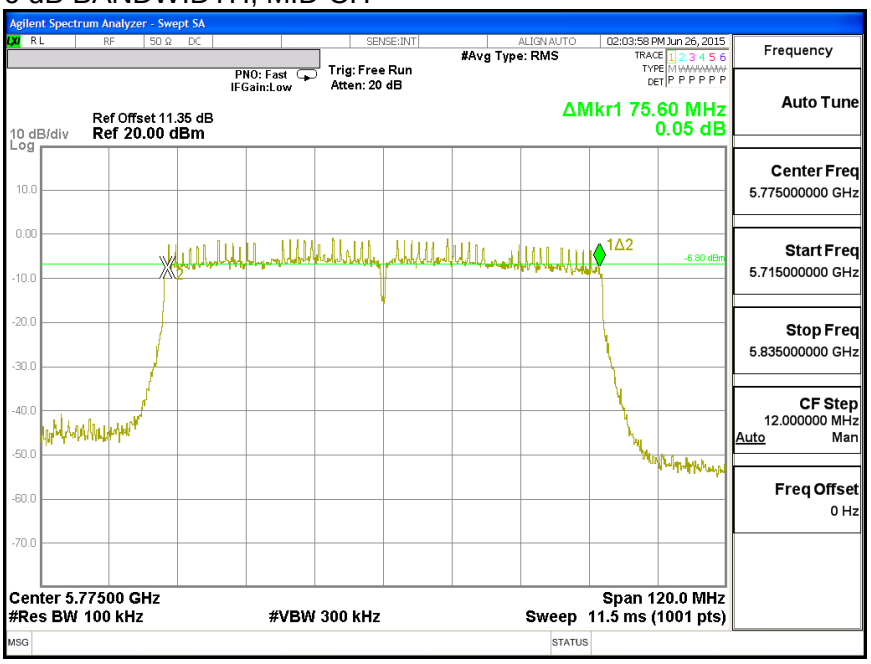
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Mid	5775	75.60	0.5

6 dB BANDWIDTH

6 dB BANDWIDTH, MID CH



8.45.2. 26 dB BANDWIDTH

LIMITS

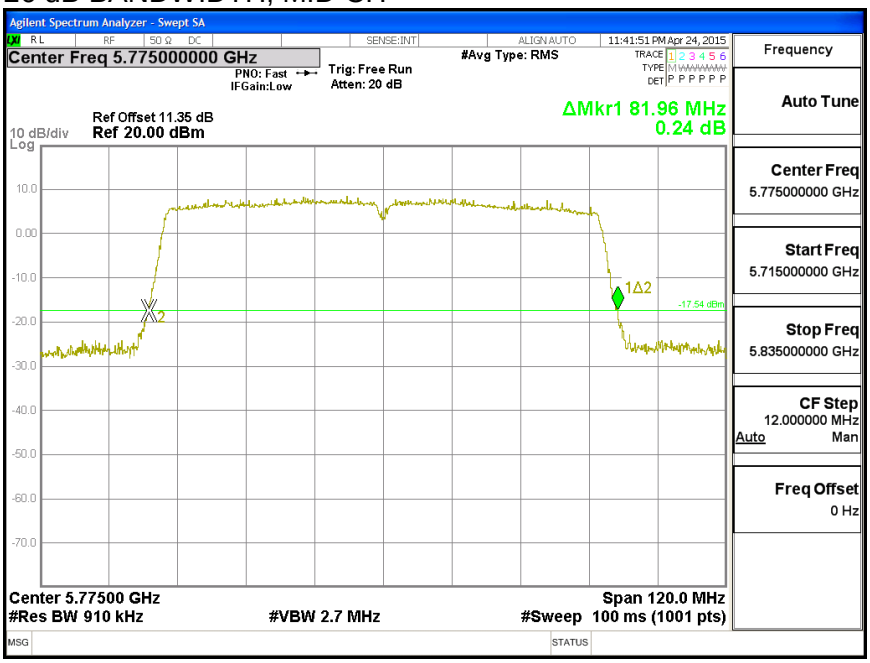
None, for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Mid	5775	81.96

26 dB BANDWIDTH

26 dB BANDWIDTH, MID CH



8.45.3. 99% BANDWIDTH

LIMITS

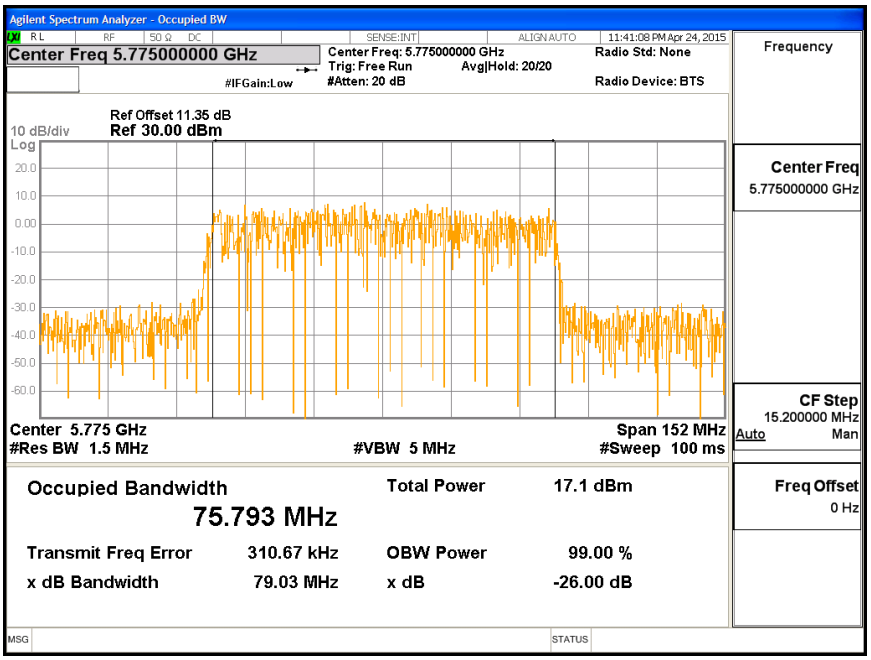
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Mid	5775	75.793

99% BANDWIDTH

BANDWIDTH MID CH



8.45.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Mid	5775	14.95

8.45.5. OUTPUT POWER

LIMITS

FCC §15.407 (a) (3)

IC RSS-247 (6.2.4) (1)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum 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.

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Mid	5775	-4.33	30.00

Duty Cycle CF (dB)	0.21	Included in Calculations of Corr'd Power

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5775	14.95	15.16	30.00	-14.84

8.45.6. PSD

LIMITS

FCC §15.407 (a) (3)

IC RSS-247 (6.2.4) (1)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum 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.

RESULTS

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Mid	5775	-4.33	30.00

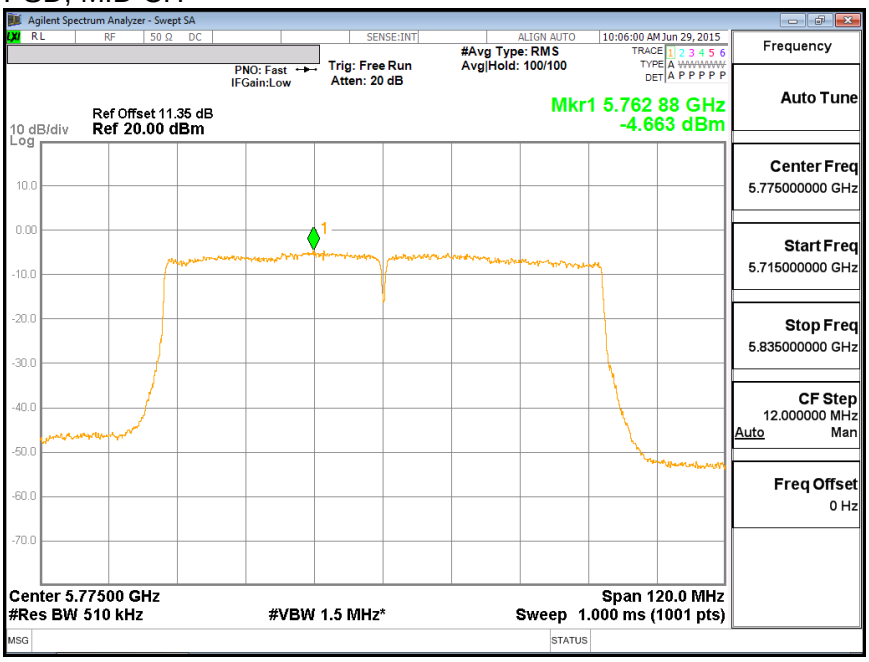
Duty Cycle CF (dB)	0.21	**Included in Calculations of Corr'd PSD**

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Mid	5775	-4.663	-4.45	30.00	-34.45

PSD,

PSD, MID CH



8.46. 802.11ac VHT80 CHAIN 1 MODE IN THE 5.8 GHz BAND

8.46.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

IC RSS-247 (6.2.4) (1)

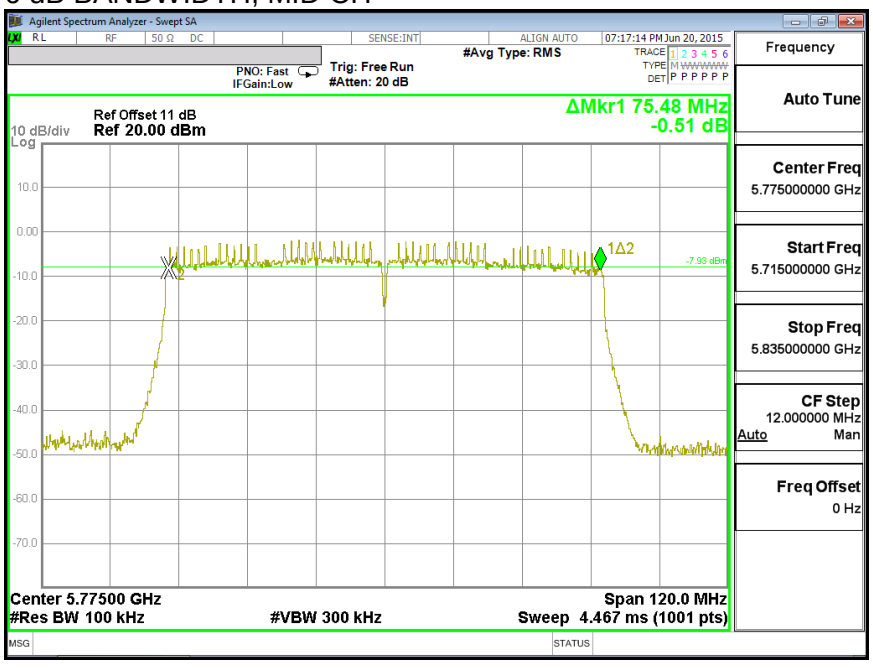
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Mid	5775	75.48	0.5

6 dB BANDWIDTH

6 dB BANDWIDTH, MID CH



8.46.2. 26 dB BANDWIDTH

LIMITS

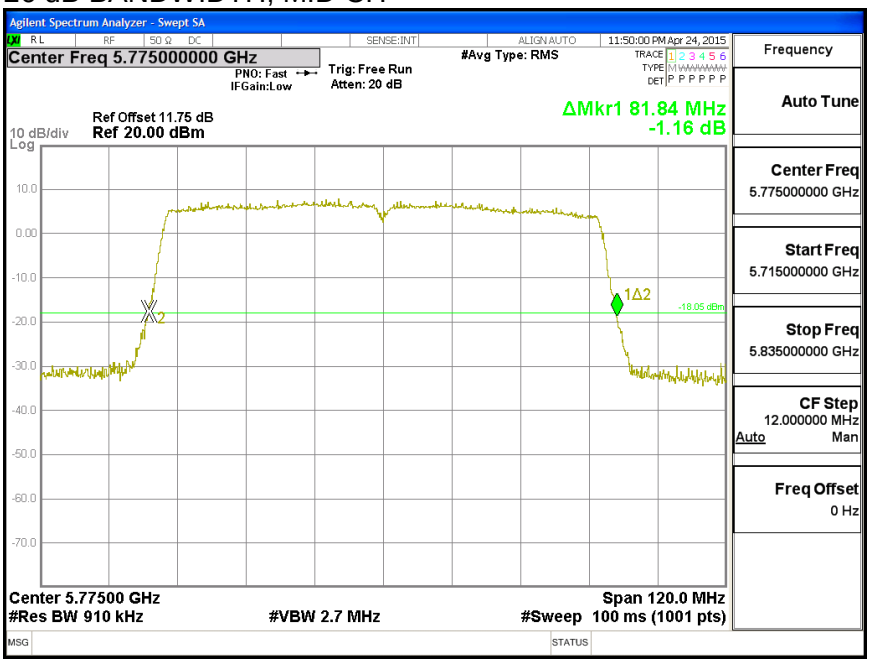
None, for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Mid	5775	81.84

26 dB BANDWIDTH

26 dB BANDWIDTH, MID CH



8.46.3. 99% BANDWIDTH

LIMITS

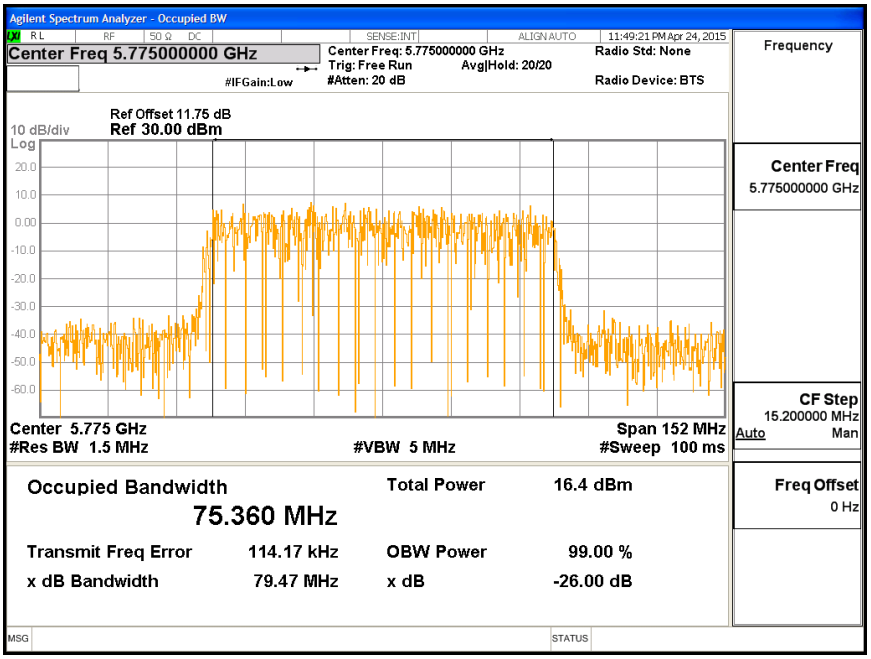
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Mid	5775	75.360

99% BANDWIDTH

BANDWIDTH MID CH



8.46.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Mid	5775	14.89

8.46.5. OUTPUT POWER

LIMITS

FCC §15.407 (a) (3)

IC RSS-247 (6.2.4) (1)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum 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.

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Mid	5775	-1.00	30.00

Duty Cycle CF (dB)	0.21	Included in Calculations of Corr'd Power

Output Power Results

Channel	Frequency (MHz)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5775	14.89	15.10	30.00	-14.90

8.46.6. PSD

LIMITS

FCC §15.407 (a) (3)

IC RSS-247 (6.2.4) (1)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum 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.

RESULTS

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Mid	5775	-1.00	30.00

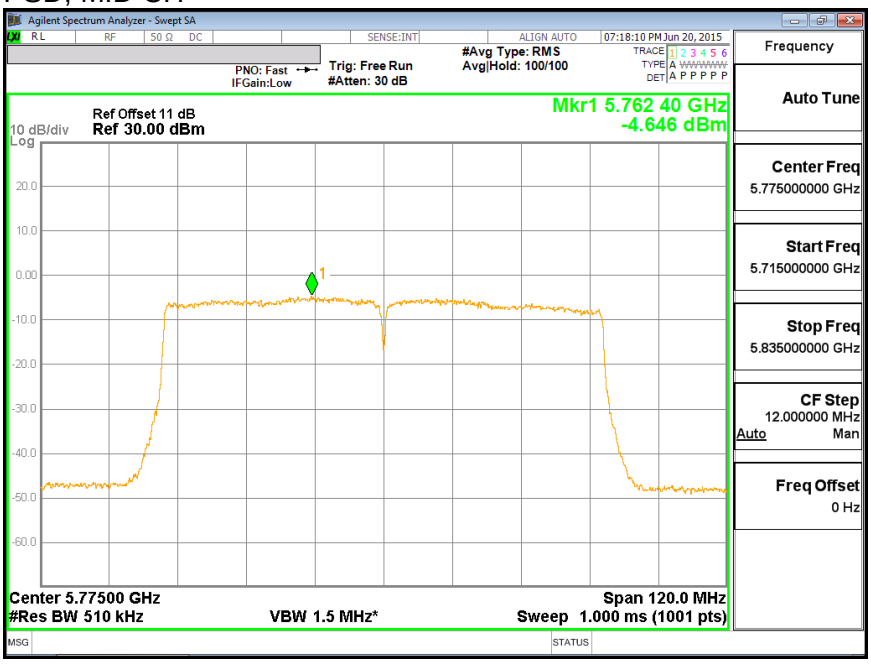
Duty Cycle CF (dB)	0.21	Included in Calculations of Corr'd PSD

PSD Results

Channel	Frequency (MHz)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Mid	5775	-4.646	-4.44	30.00	-34.44

PSD,

PSD, MID CH



8.47. 802.11ac VHT80 2Tx CDD MODE IN THE 5.8 GHz BAND

8.47.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

IC RSS-247 (6.2.4) (1)

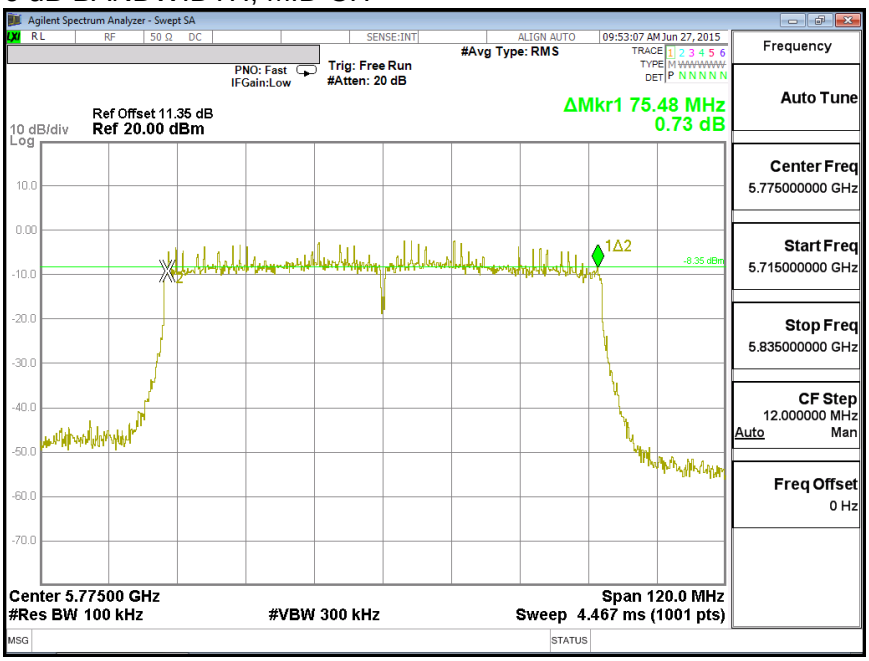
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

Channel	Frequency (MHz)	6 dB BW Chain 0 (MHz)	6 dB BW Chain 1 (MHz)	Minimum Limit (MHz)
Mid	5775	75.48	76.08	0.5

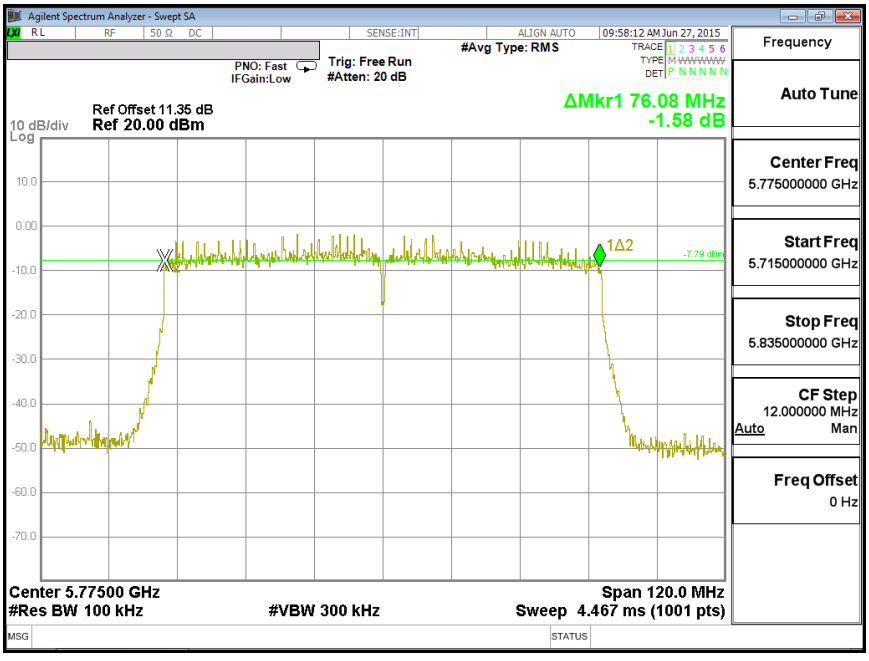
6 dB BANDWIDTH, CHAIN 0

6 dB BANDWIDTH, MID CH



6 DB BANDWIDTH, CHAIN 1

6 dB BANDWIDTH Chain 1 MID CH



8.47.2. 26 dB BANDWIDTH

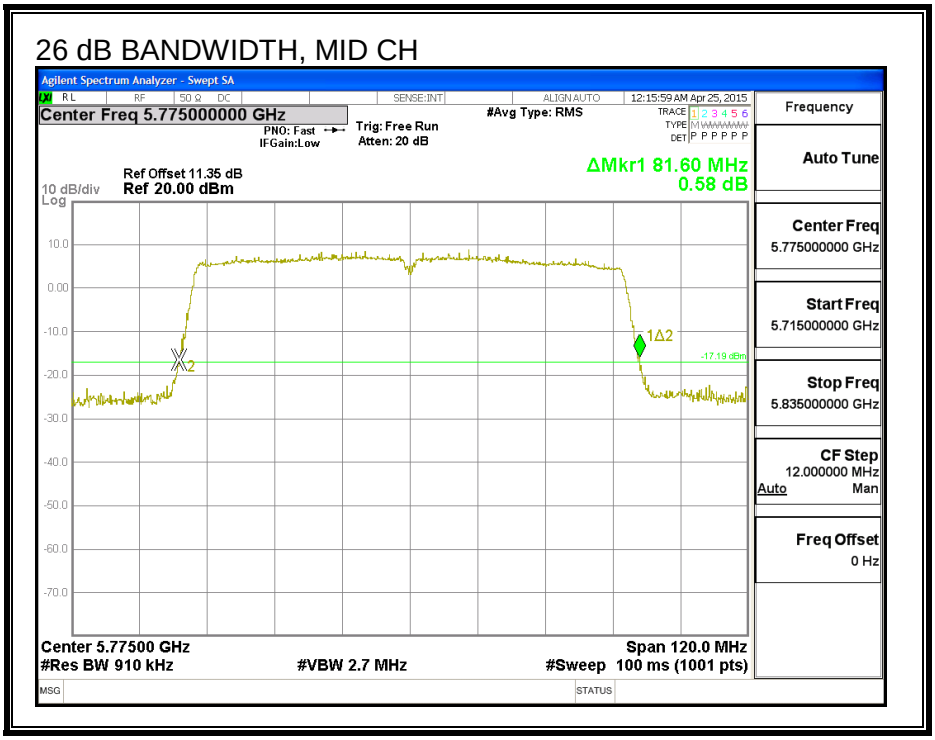
LIMITS

None, for reporting purposes only.

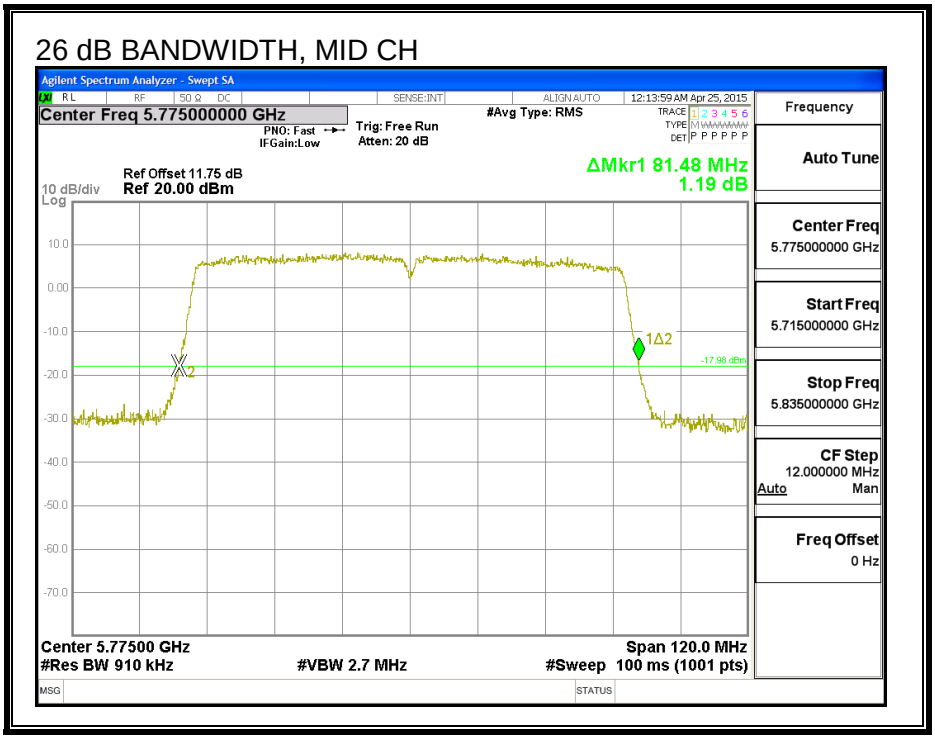
RESULTS

Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)
Mid	5775	81.60	81.48

26 dB BANDWIDTH, CHAIN 0



26 dB BANDWIDTH, CHAIN 1



8.47.3. 99% BANDWIDTH

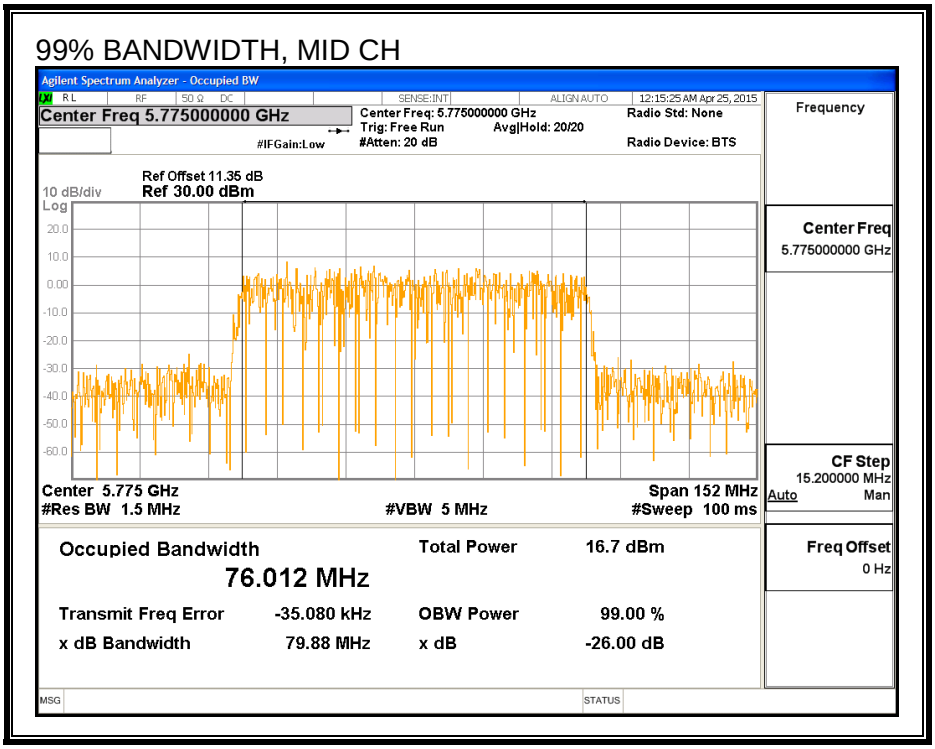
LIMITS

None; for reporting purposes only.

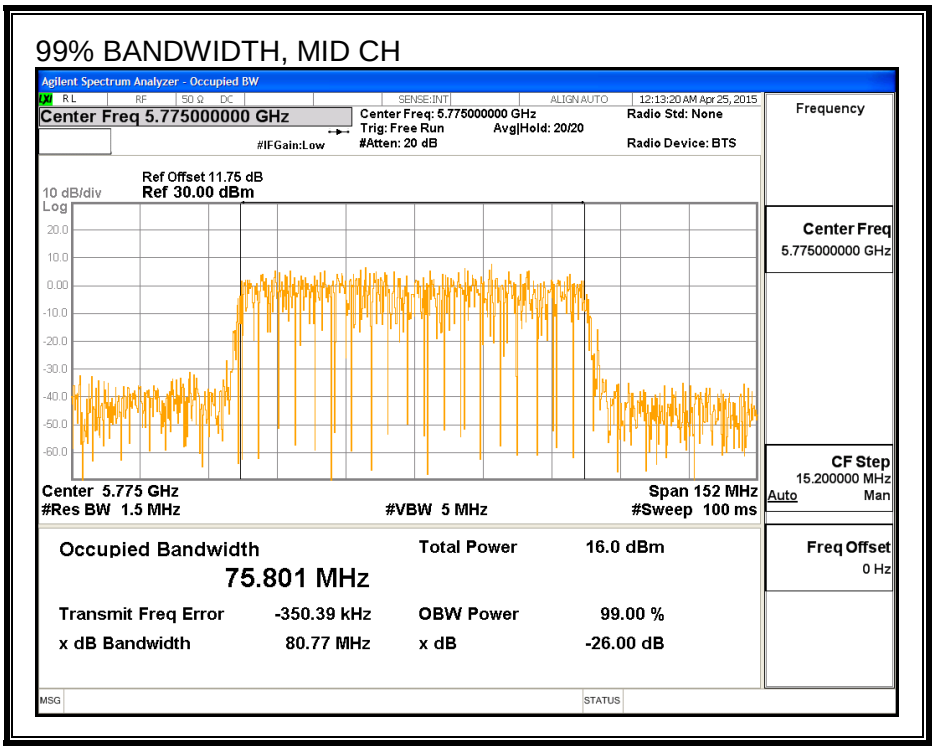
RESULTS

Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Mid	5775	76.012	75.801

99% BANDWIDTH, CHAIN 0



99% BANDWIDTH, CHAIN 1



8.47.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	Chain 0 Power (dBm)	Chain 1 Power (dBm)	Total Power (dBm)
Mid	5775	14.98	14.88	17.94

8.47.5. OUTPUT POWER

LIMITS

FCC §15.407 (a) (3)

IC RSS-247 (6.2.4) (1)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum 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 unequal among the chains. The directional gain is:

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
-4.33	-1.00	-2.35

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Mid	5775	-2.35	30.00

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

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5775	14.98	14.88	18.16	30.00	-11.84

8.47.6. PSD

LIMITS

FCC §15.407 (a) (3)

IC RSS-247 (6.2.4) (1)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum 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 unequal among the chains. The directional gain is:

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
-4.33	-1.00	0.50

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Mid	5775	0.50	30.00

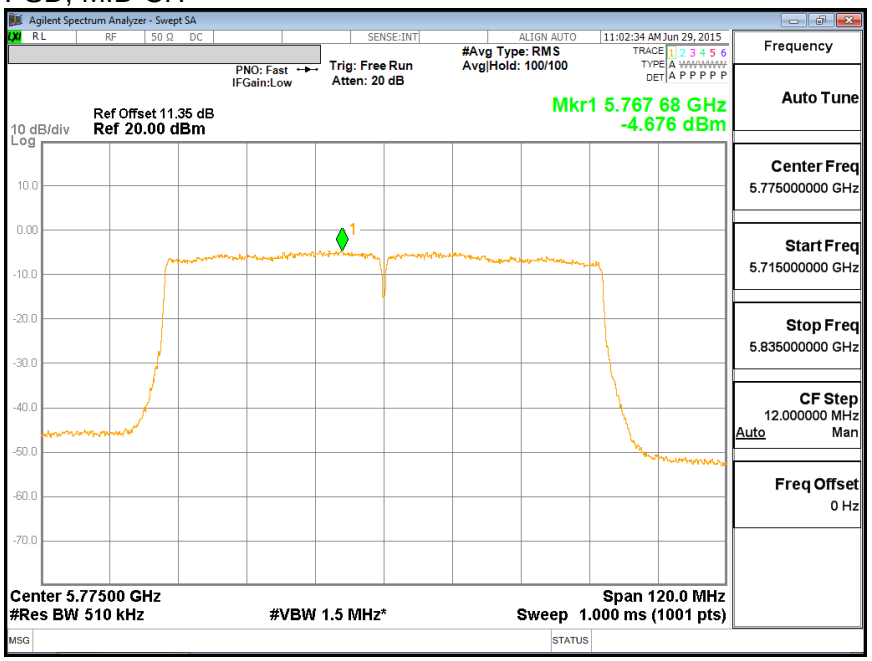
Duty Cycle CF (dB)	0.22	Included in Calculations of Corr'd PSD

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Mid	5775	-4.68	-4.64	-1.43	30.00	-31.43

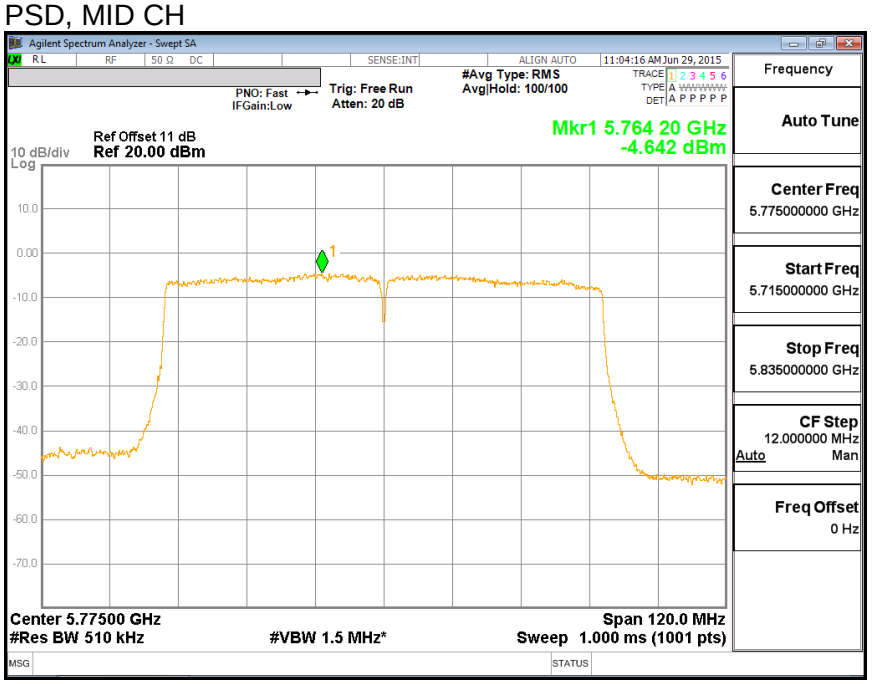
PSD,

PSD, MID CH



PSD, CHAIN 1

PSD, MID CH



8.48. 802.11ac VHT80 2Tx STBC MODE IN THE 5.8 GHz BAND

Note: Covered by 802.11ac VHT80 2Tx CDD MODE

9. ANTENNA PORT TEST RESULTS (MODEL: A1688)

For antenna port data, refer to Model A1633.

10. RADIATED TEST RESULTS (MODEL: A1633)

10.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

IC RSS-GEN, Section 8.9 and 8.10.

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for measurement below 1GHz; 1.5 m above the ground plane for measurement above 1GHz. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and as applicable for average measurements.

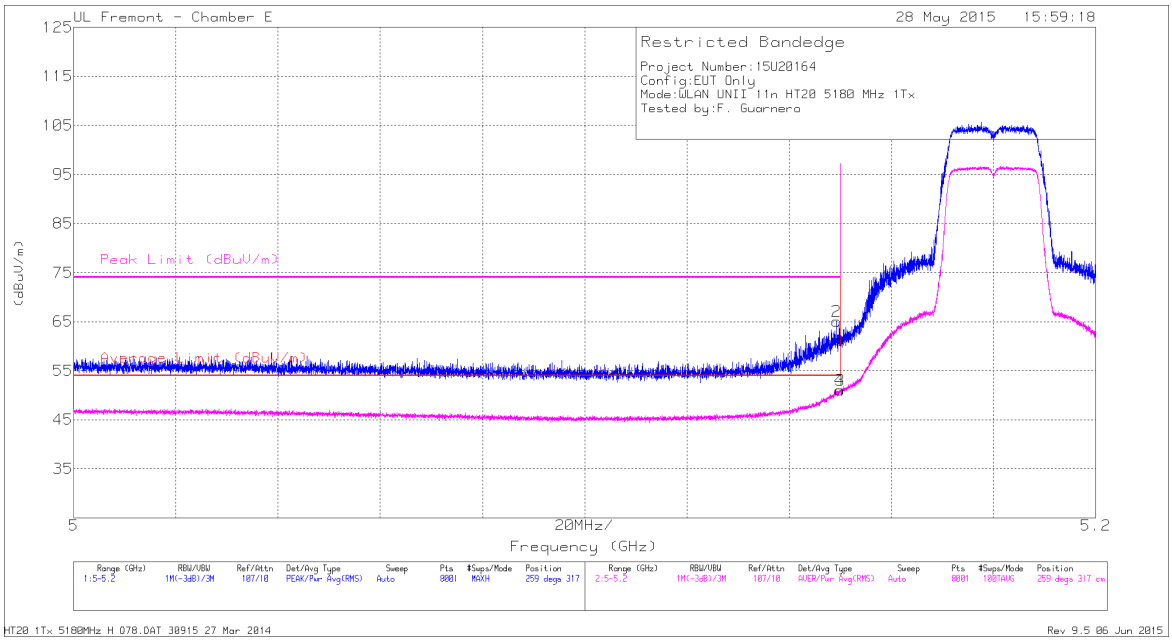
The spectrum from 30 MHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.

The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

10.2. 802.11n HT20 1Tx MODE IN THE 5.2 GHz BAND

RESTRICTED BANDEDGE, CHAIN 0 (LOW CHANNEL)

LOW CHANNEL HORIZONTAL PLOT



DATA

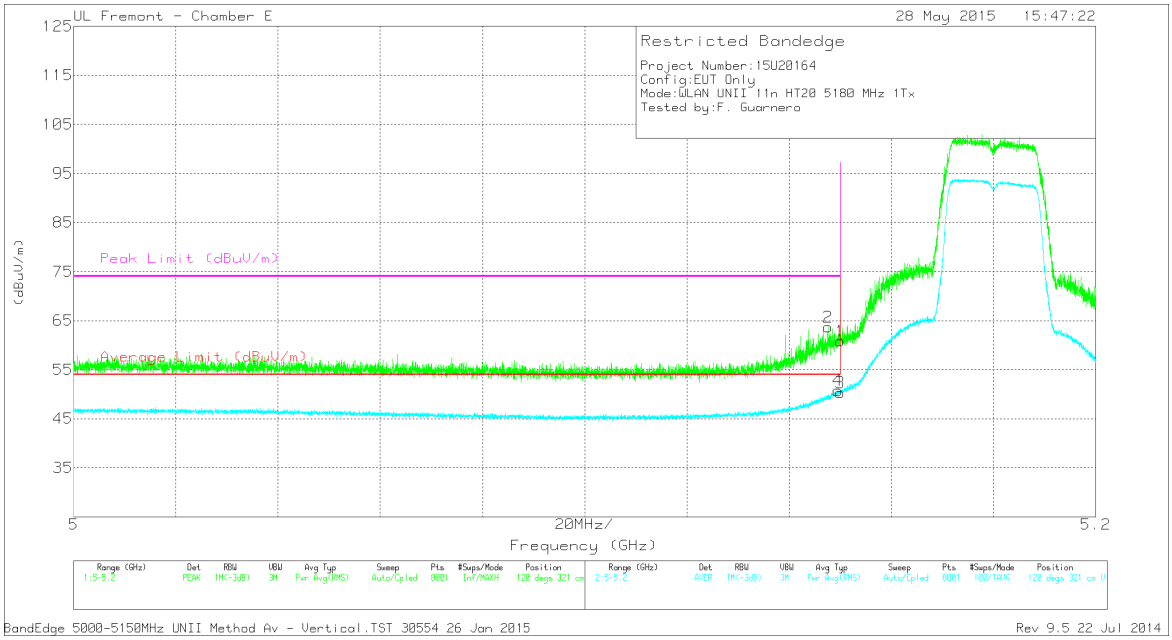
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	48.36	Pk	34.3	-21.4	61.26	-	-	74	-12.74	259	317	H
2	* 5.149	52.12	Pk	34.3	-21.4	65.02	-	-	74	-8.98	259	317	H
3	* 5.15	38.31	RMS	34.3	-21.4	51.21	54	-2.79	-	-	259	317	H
4	* 5.15	38.22	RMS	34.3	-21.4	51.12	54	-2.88	-	-	259	317	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection

LOW CHANNEL VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.148	50.77	PK	34.3	-21.4	63.67	-	-	74	-10.33	120	321	V
1	* 5.15	47.89	PK	34.3	-21.4	60.79	-	-	74	-13.21	120	321	V
3	* 5.15	37.73	RMS	34.3	-21.4	50.63	54	-3.37	-	-	120	321	V
4	* 5.15	38.27	RMS	34.3	-21.4	51.17	54	-2.83	-	-	120	321	V

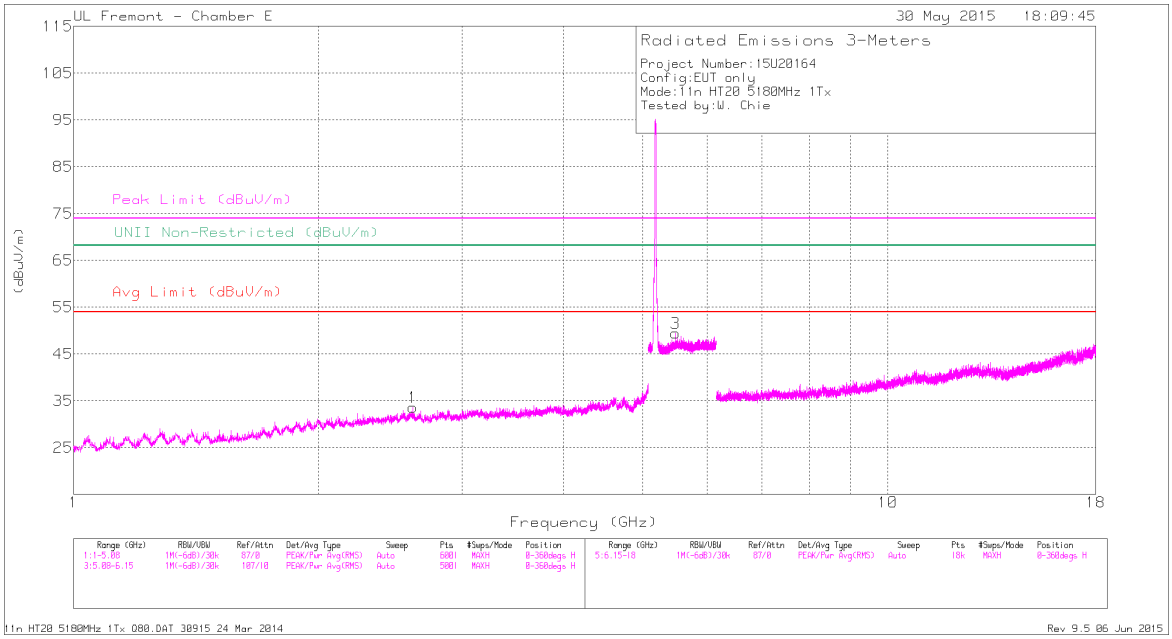
* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK - Peak detector

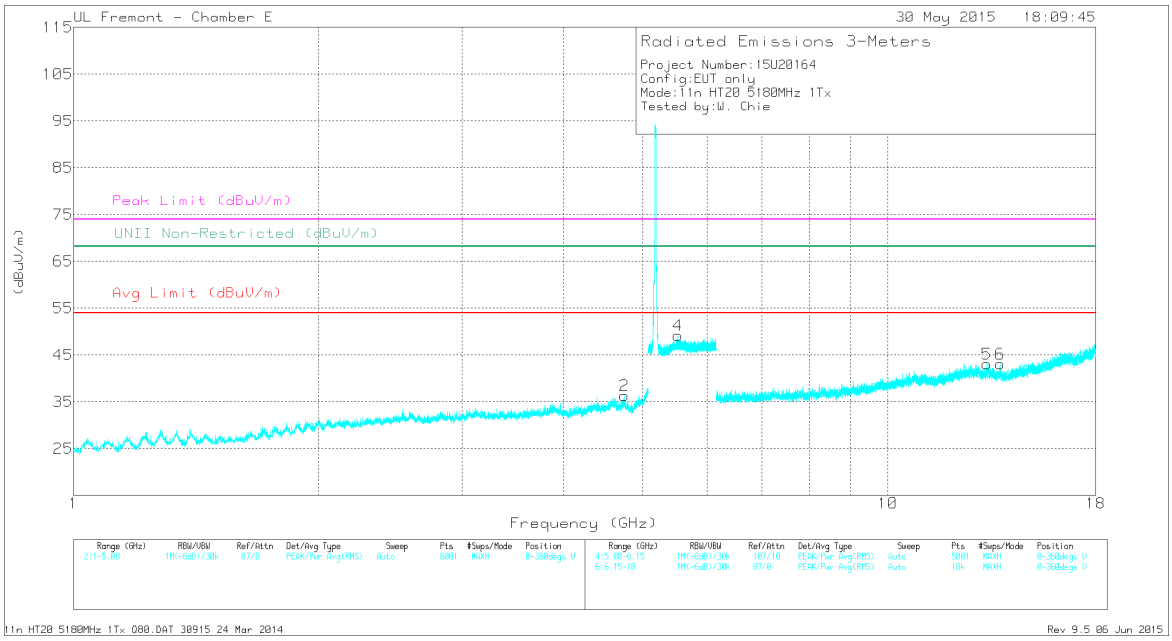
RMS - RMS detection

LOW CHANNEL HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 4.743	40.96	PK3	34.2	-31.6	43.56	-	-	74	-30.44	-	-	119	125	V
	* 4.745	29.57	ADR	34.2	-31.7	32.07	54	-21.93	-	-	-	-	119	125	V
1	2.612	41.94	PK3	32.5	-33.3	41.14	-	-	74	-32.86	68.2	-27.06	267	137	H
3	5.482	42.43	PK3	35.4	-22.4	55.43	-	-	74	-18.57	68.2	-12.77	227	167	H
4	5.525	42.54	PK3	35.4	-22.4	55.54	-	-	74	-18.46	68.2	-12.66	273	194	V
5	13.235	36.86	PK3	39.3	-26	50.16	-	-	74	-23.84	68.2	-18.04	242	211	V
6	13.733	36.86	PK3	39.1	-25.6	50.36	-	-	74	-23.64	68.2	-17.84	224	171	V

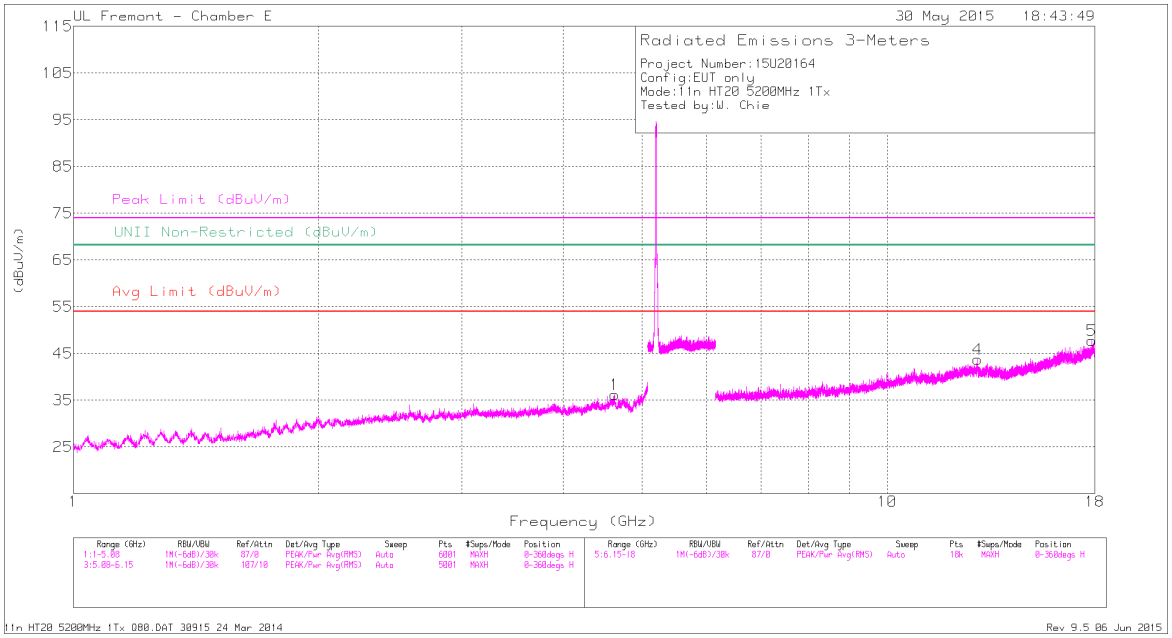
* - indicates frequency in CFR15.205/IC8.10 Restricted Band

PK3 - U-NII: Maximum Peak

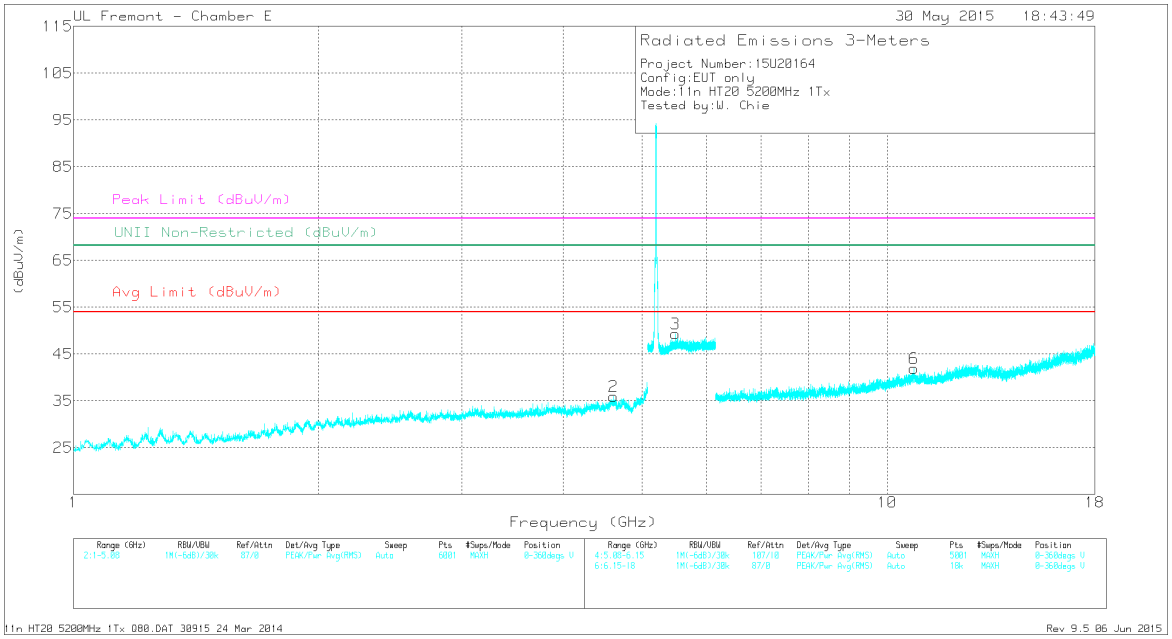
ADR - U-NII AD primary method, RMS average

MID CHANNEL HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.628	41.53	PK3	34	-32	43.53	-	-	74	-30.47	-	-	146	169	H
	* 4.629	29.88	ADR	34.1	-32	31.98	54	-22.02	-	-	-	-	146	169	H
2	* 4.612	41.48	PK3	34	-31.7	43.78	-	-	74	-30.22	-	-	79	202	V
	* 4.614	29.71	ADR	34	-31.7	32.01	54	-21.99	-	-	-	-	79	202	V
5	* 17.84	34.55	PK3	41.9	-22.1	54.35	-	-	74	-19.65	-	-	66	121	H
	* 17.84	22.56	ADR	41.9	-22.1	42.36	54	-11.64	-	-	-	-	66	121	H
6	* 10.785	35.84	PK3	37.9	-24.4	49.34	-	-	74	-24.66	-	-	328	113	V
	* 10.784	24.07	ADR	37.9	-24.4	37.57	54	-16.43	-	-	-	-	328	113	V
3	5.496	43.23	PK3	35.5	-22.4	56.33	-	-	-	-	68.2	-11.87	183	240	V
4	12.927	36.23	PK3	39.4	-24.7	50.93	-	-	-	-	68.2	-17.27	236	163	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

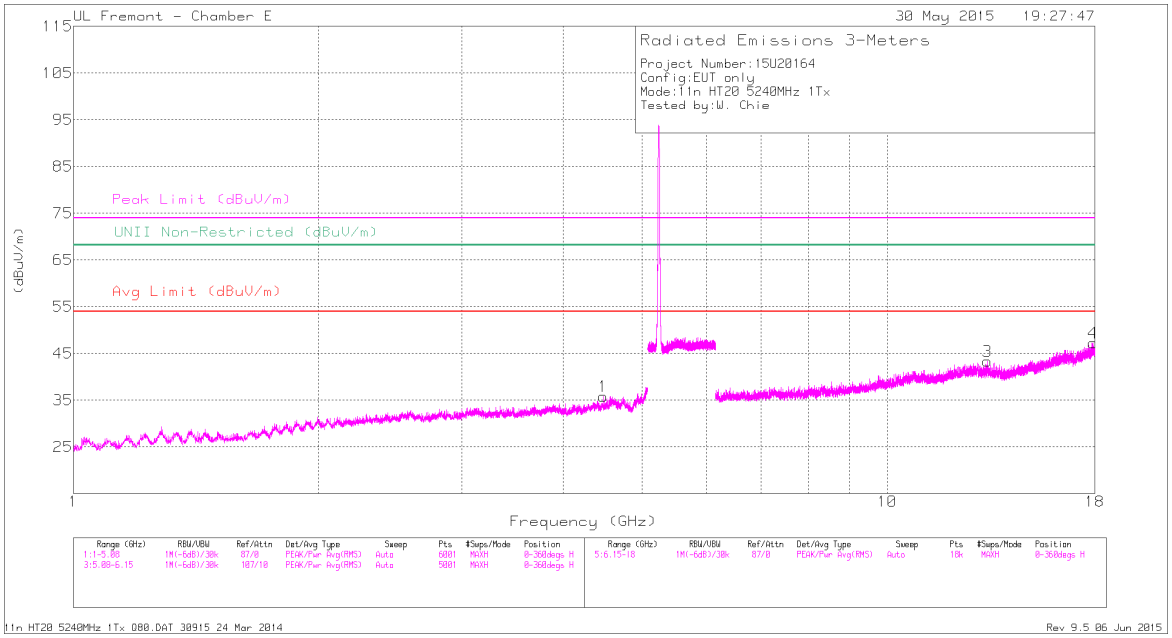
PK1 - KDB789033 Method: Peak

PK3 - U-NII: Maximum Peak

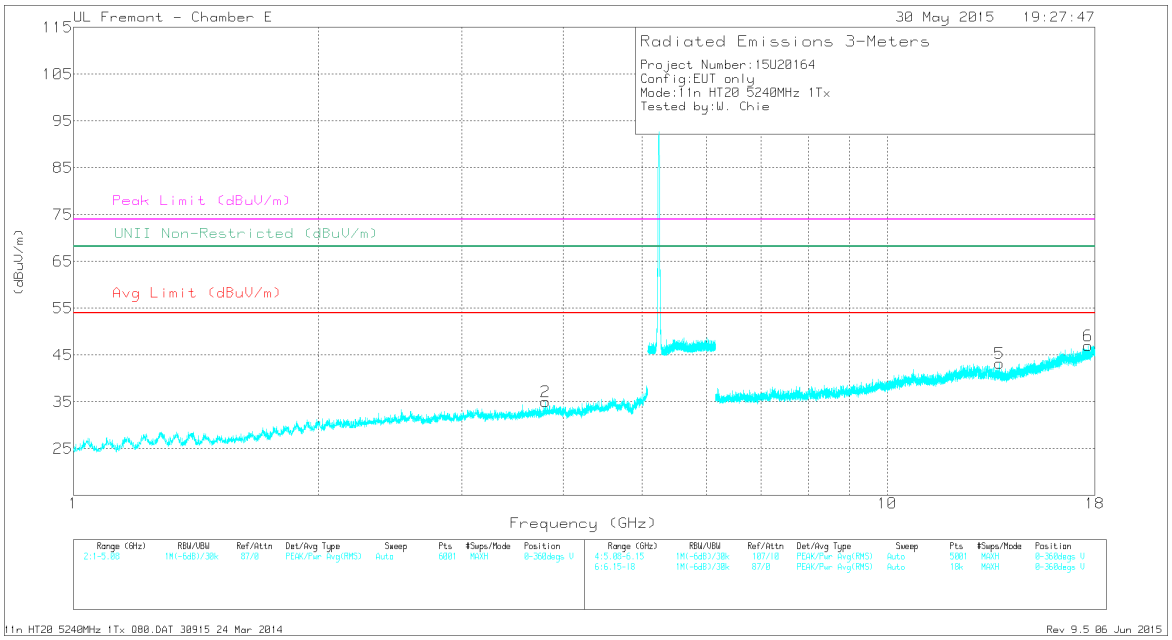
ADR - U-NII AD primary method, RMS average

HIGH CHANNEL HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 3.803	41.7	PK3	33.4	-32.8	42.3	-	-	74	-31.7	-	-	302	340	V
	* 3.804	29.76	ADR	33.4	-32.8	30.36	54	-23.64	-	-	-	-	302	340	V
3	* 13.28	36.45	PK3	39.4	-25.2	50.65	-	-	74	-23.35	-	-	353	247	H
	* 13.279	24.99	ADR	39.4	-25.2	39.19	54	-14.81	-	-	-	-	353	247	H
4	* 17.903	33.4	PK3	41.9	-20.9	54.4	-	-	74	-19.6	-	-	45	370	H
	* 17.904	22.36	ADR	41.9	-20.9	43.36	54	-10.64	-	-	-	-	45	370	H
1	4.474	41.79	PK3	33.8	-32.7	42.89	-	-	-	-	68.2	-25.31	274	167	H
5	13.732	37.07	PK3	39.1	-25.6	50.57	-	-	-	-	68.2	-17.63	176	248	V
6	17.676	34.27	PK3	42	-22.3	53.97	-	-	-	-	68.2	-14.23	284	176	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

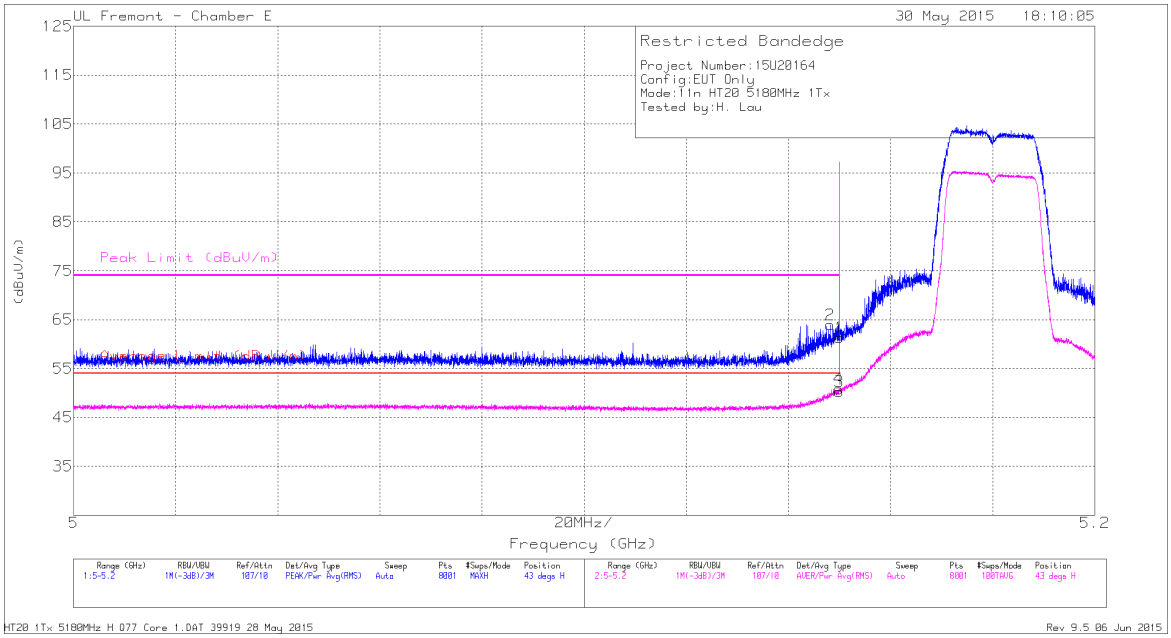
PK1 - KDB789033 Method: Peak

PK3 - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

RESTRICTED BANDEDGE, CHAIN 1 (LOW CHANNEL)

LOW CHANNEL HORIZONTAL PLOT



DATA

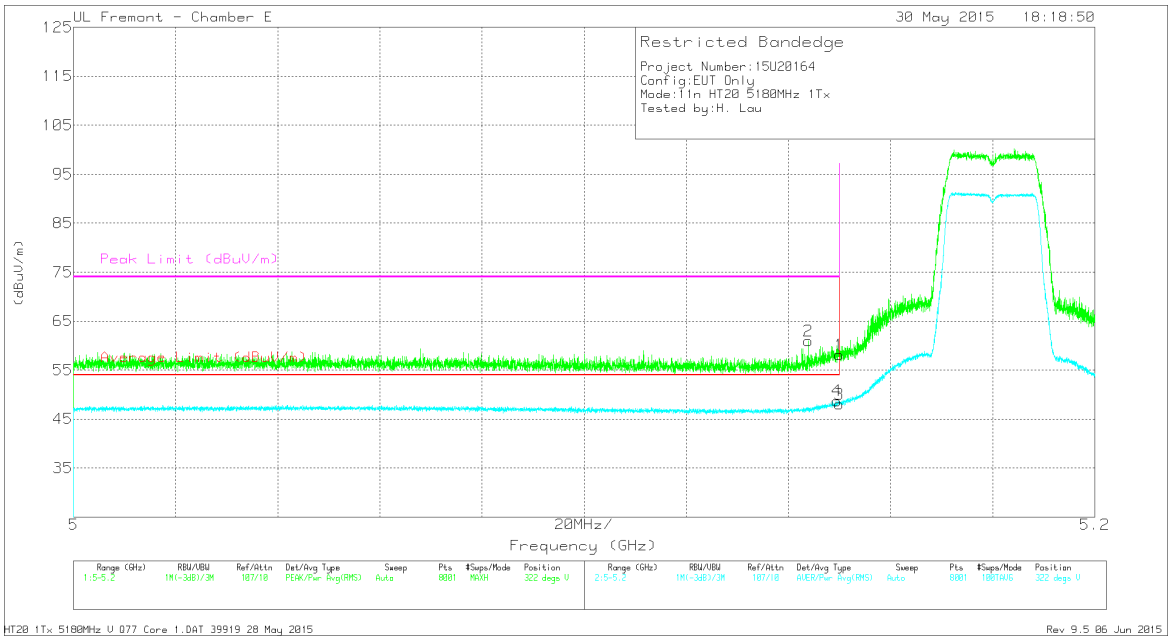
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.148	48.18	Pk	34.3	-18.5	63.98	-	-	74	-10.02	43	258	H
1	* 5.15	45.56	Pk	34.3	-18.5	61.36	-	-	74	-12.64	43	258	H
3	* 5.15	34.53	RMS	34.3	-18.5	50.33	54	-3.67	-	-	43	258	H
4	* 5.15	35.05	RMS	34.3	-18.5	50.85	54	-3.15	-	-	43	258	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection

LOW CHANNEL VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.144	45.22	Pk	34.3	-18.5	61.02	-	-	74	-12.98	322	279	V
1	* 5.15	42.27	Pk	34.3	-18.5	58.07	-	-	74	-15.93	322	279	V
3	* 5.15	32.25	RMS	34.3	-18.5	48.05	54	-5.95	-	-	322	279	V
4	* 5.15	32.94	RMS	34.3	-18.5	48.74	54	-5.26	-	-	322	279	V

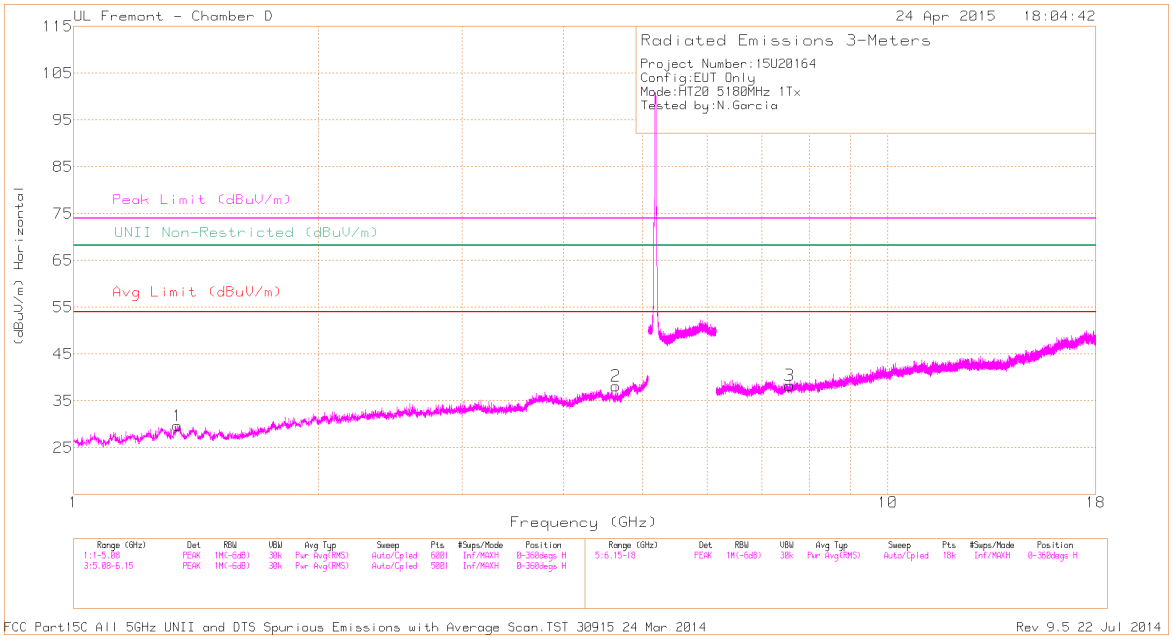
* - indicates frequency in CFR15.205/IC8.10 Restricted Band

Pk - Peak detector

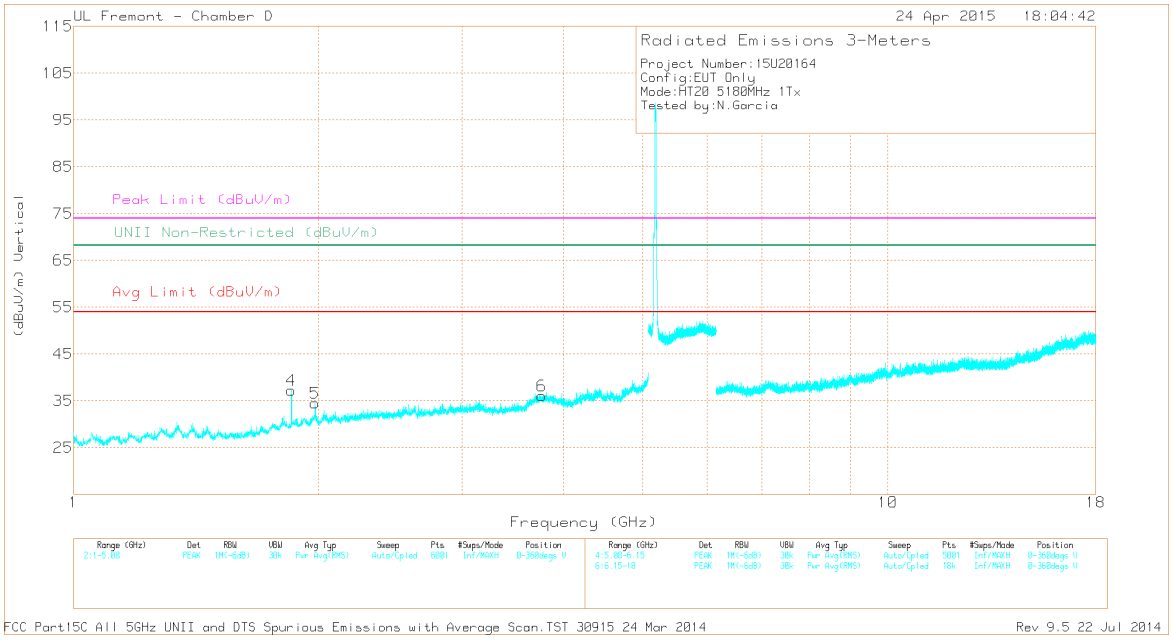
RMS - RMS detection

LOW CHANNEL HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



DATA

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.343	40.61	PK1	28.8	-31.5	37.91	-	-	74	-36.09	-	-	9	100	H
	* 1.342	29.44	AD1	28.8	-31.5	26.74	54	-27.26	-	-	-	-	9	100	H
2	* 4.634	38.16	PK1	34.1	-27.1	45.16	-	-	74	-28.84	-	-	14	112	H
	* 4.633	26.64	AD1	34.1	-27.1	33.64	54	-20.36	-	-	-	-	14	112	H
6	* 3.754	39.11	PK1	33.3	-29	43.41	-	-	74	-30.59	-	-	33	333	V
	* 3.755	27.45	AD1	33.3	-29	31.75	54	-22.25	-	-	-	-	33	333	V
3	* 7.571	35.57	PK1	35.6	-25.2	45.97	-	-	74	-28.03	-	-	43	106	H
	* 7.57	24.91	AD1	35.6	-25.2	35.31	54	-18.69	-	-	-	-	43	106	H
4	1.852	40.32	PK1	30.5	-31.4	39.42	-	-	-	-	68.2	-28.78	243	126	V
5	1.98	42.92	PK1	31	-30.8	43.12	-	-	-	-	68.2	-25.08	297	362	V

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average