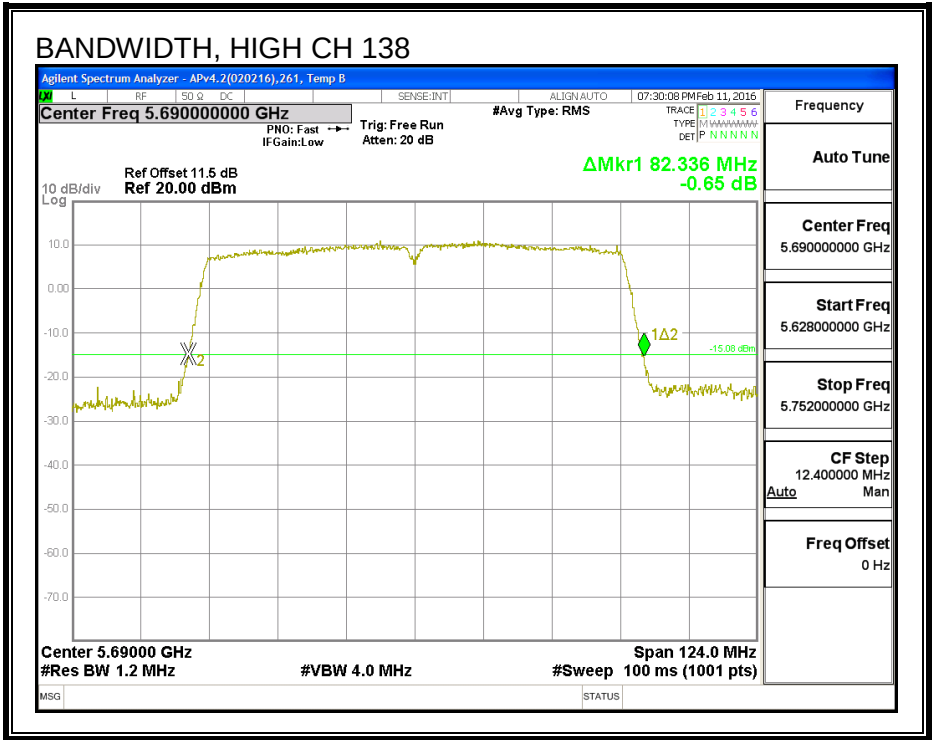
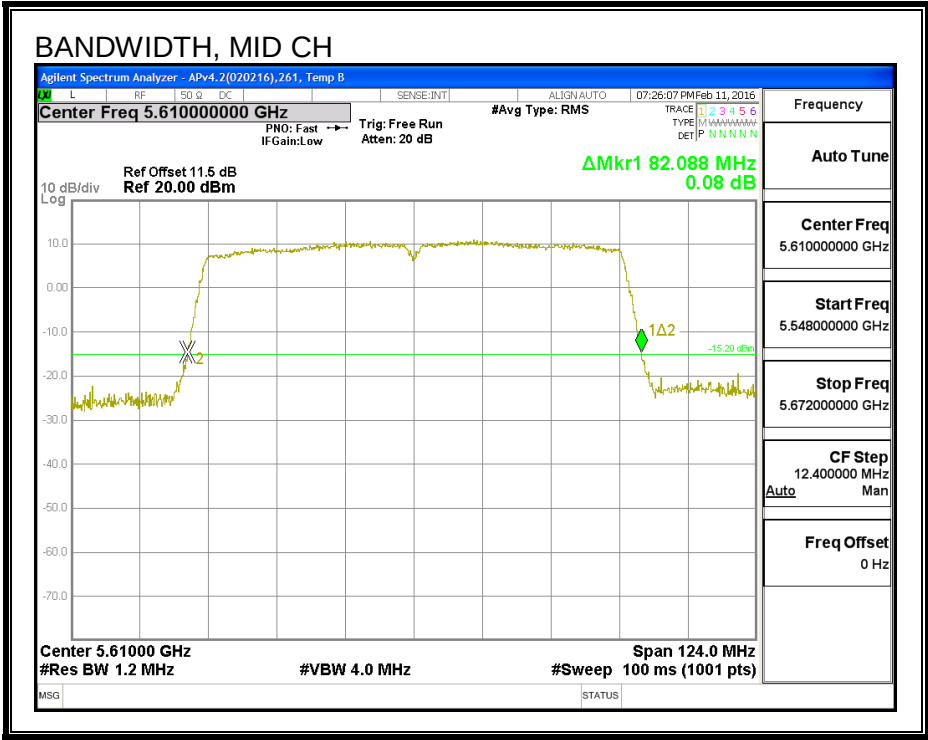




8.51.2. 99% BANDWIDTH

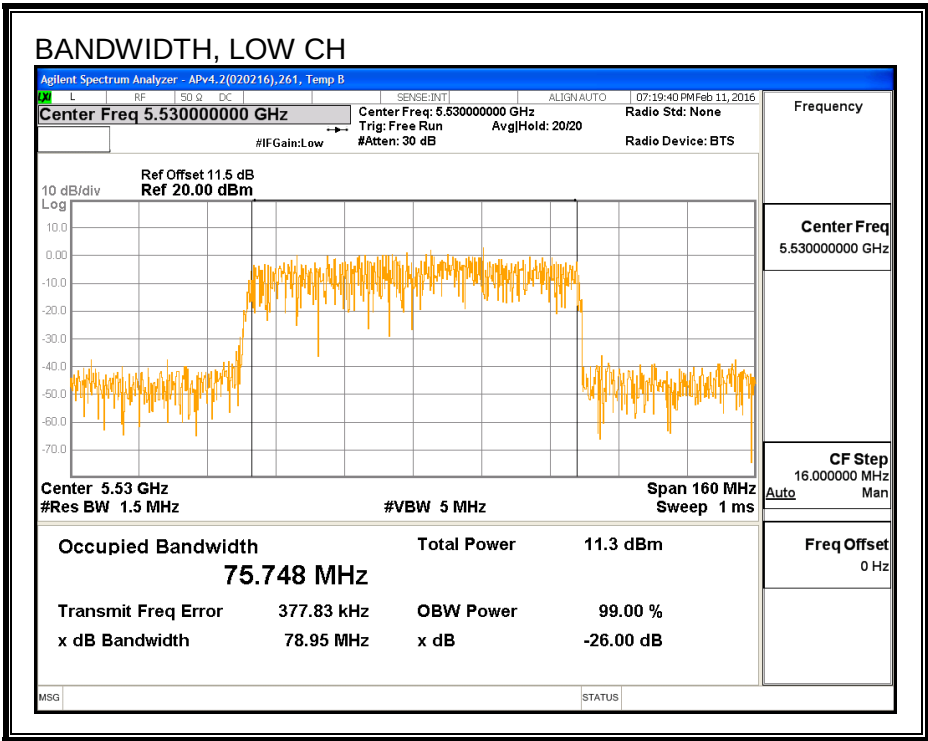
LIMITS

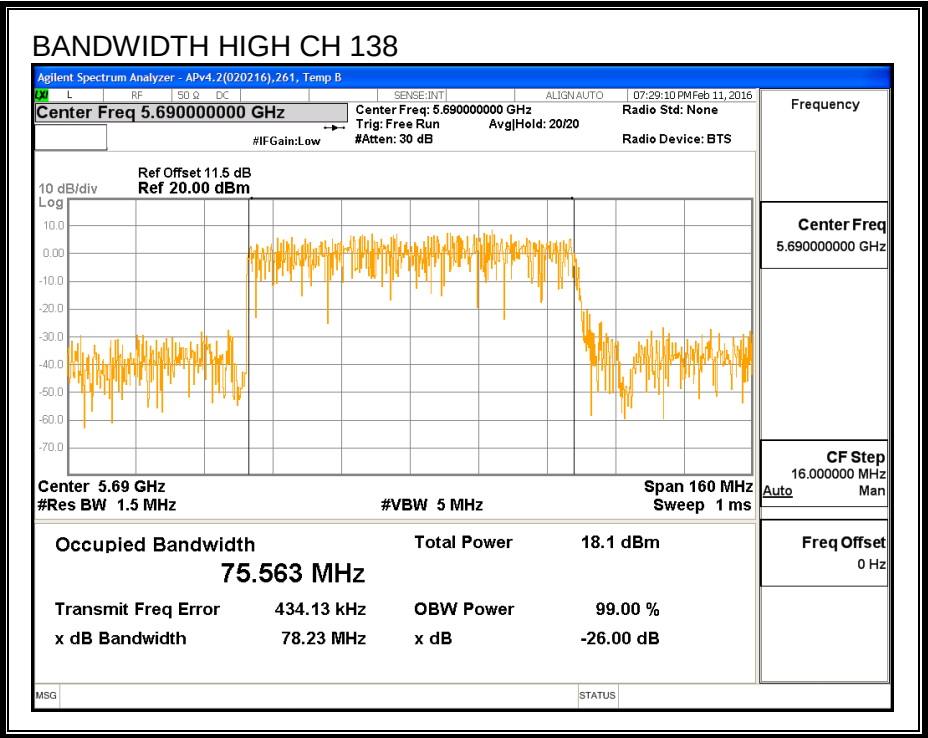
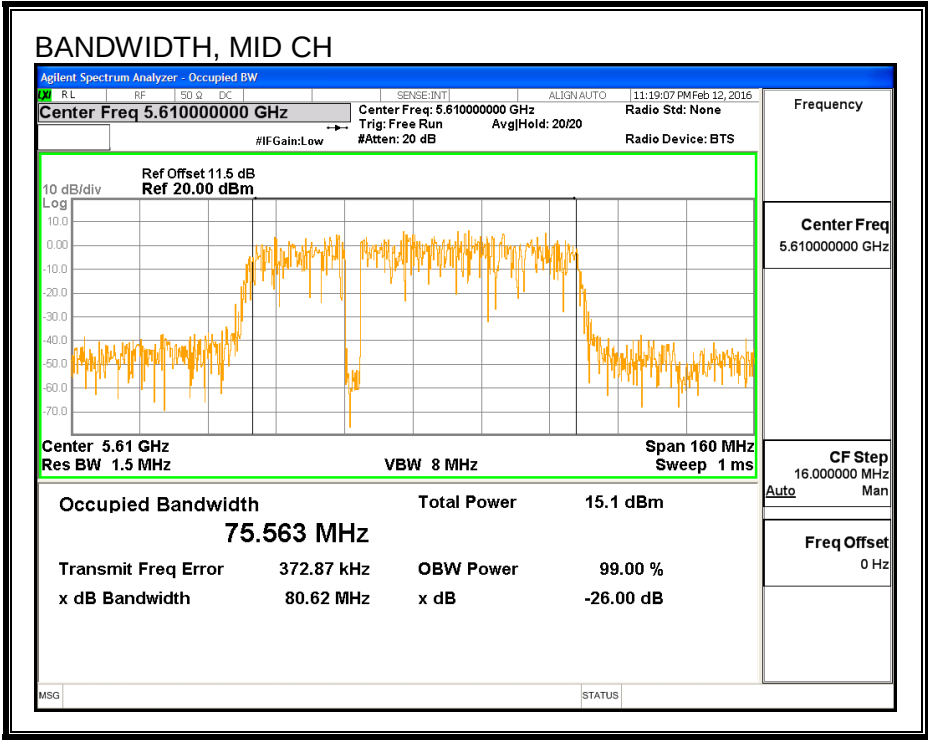
None; for reporting purposes only.

RESULTS

Frequency (MHz)	99% Bandwidth (MHz)
5530	75.748
5610	75.563
5690	75.563

99% BANDWIDTH





8.51.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Low	5530	10.46
Mid	5610	17.86
High	5690	17.99

8.51.4. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

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

TEST PROCEDURE

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

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

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5530	82.09	75.748	5.00	24.00	11.00
High	5610	82.09	75.563	5.00	24.00	11.00

Duty Cycle CF (dB)	0.16	Included in Calculations of Corr'd PSD
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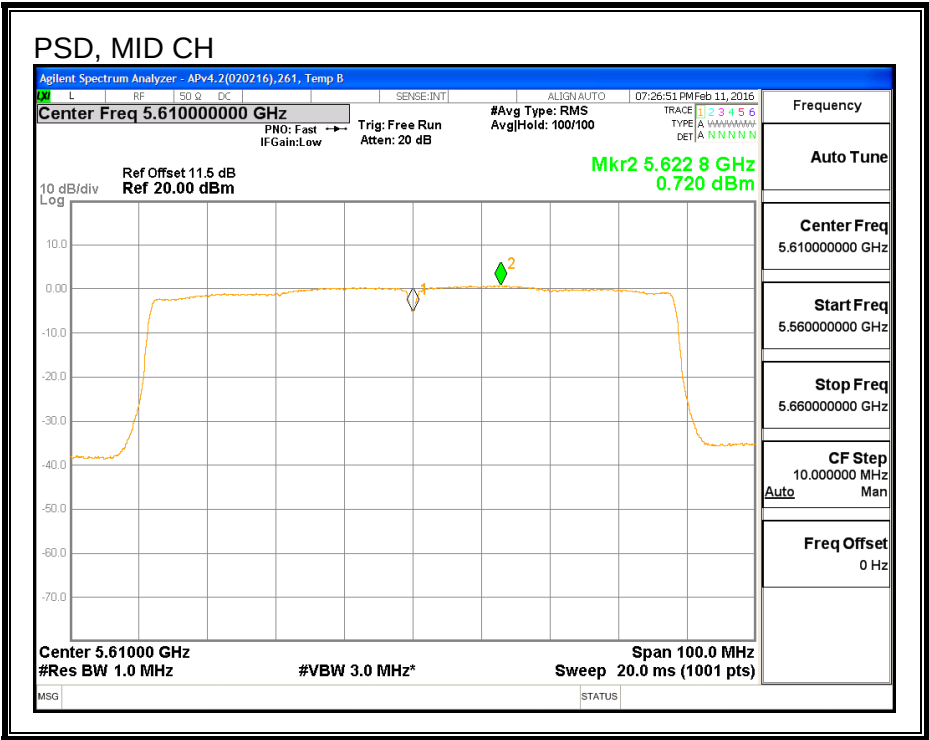
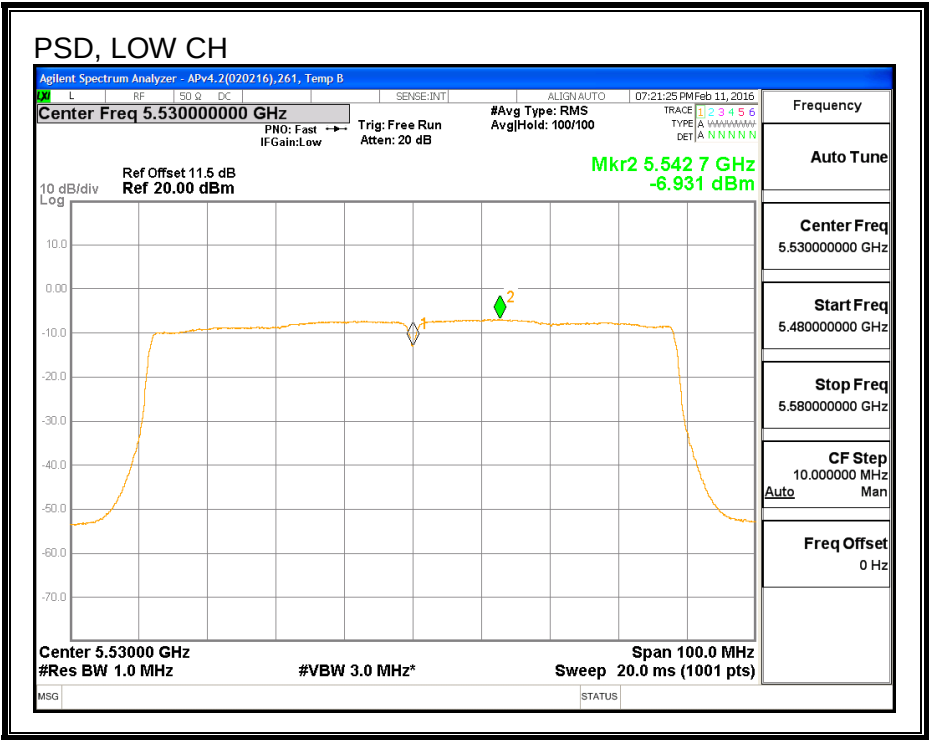
Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5530	10.46	10.46	24.00	-13.54
High	5610	17.86	17.86	24.00	-6.14

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5530	-6.93	-6.77	11.00	-17.77
High	5610	0.72	0.88	11.00	-10.12

PSD



8.51.5. STRADDLE CHANNEL 138 RESULTS (FCC)

UNII-2C BAND

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
138	5690	76.17	5.00	5.00	24.00	11.00

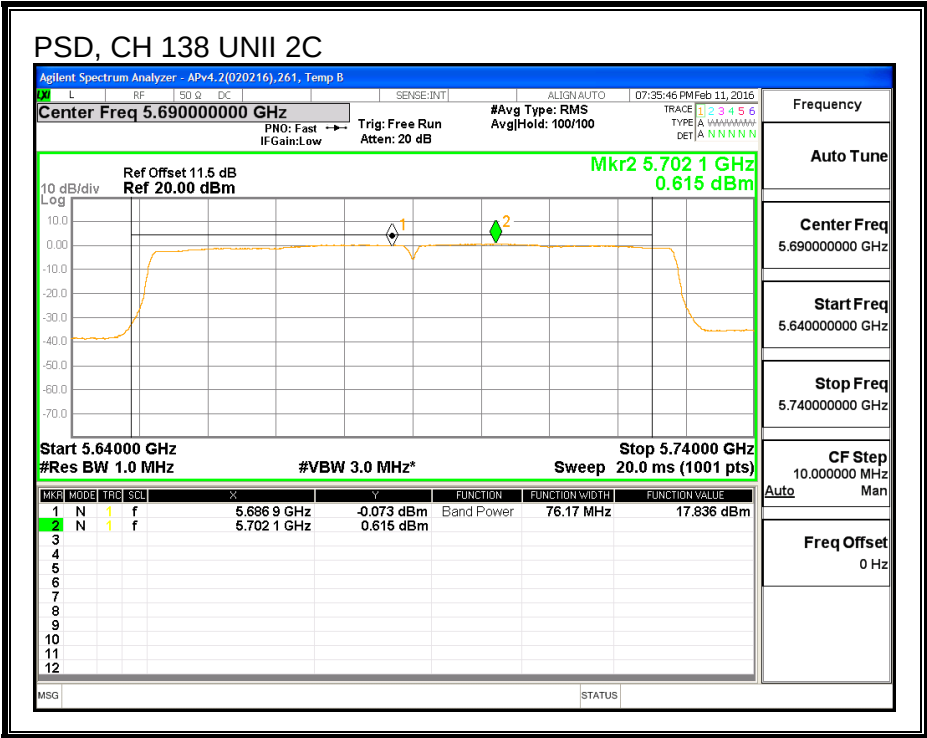
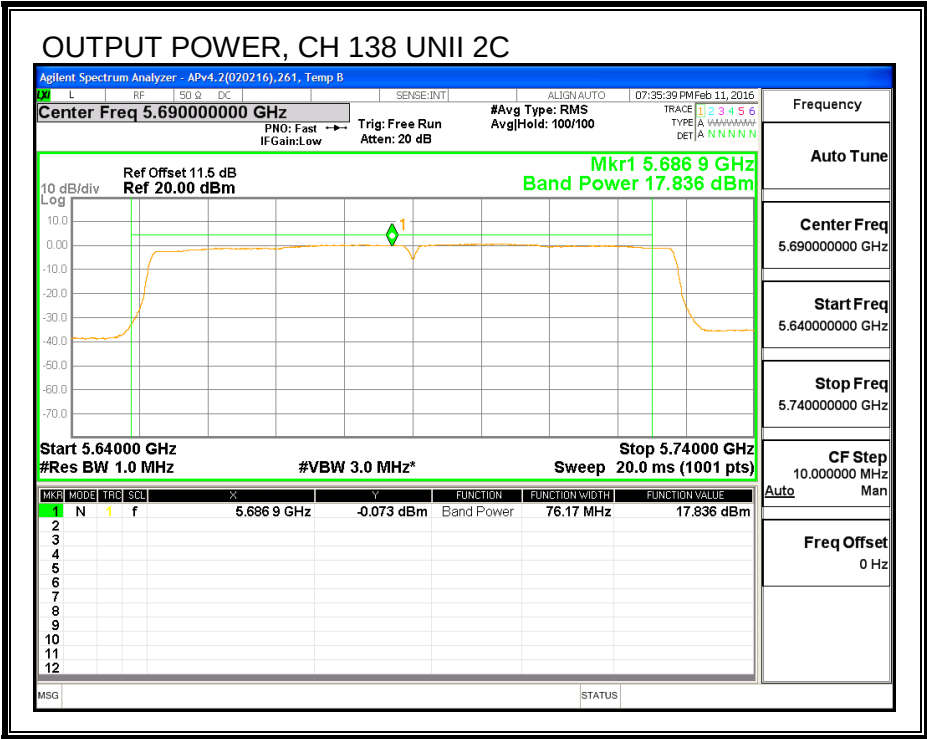
Duty Cycle CF (dB)	0.16	Included in Calculations of Corr'd Power & PSD
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	17.84	18.00	24.00	-6.00

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	0.62	0.78	11.00	-10.23



UNII-3 BAND

Antenna Gain and Limit

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
138	5690	6.17	5.00	30.00	30.00

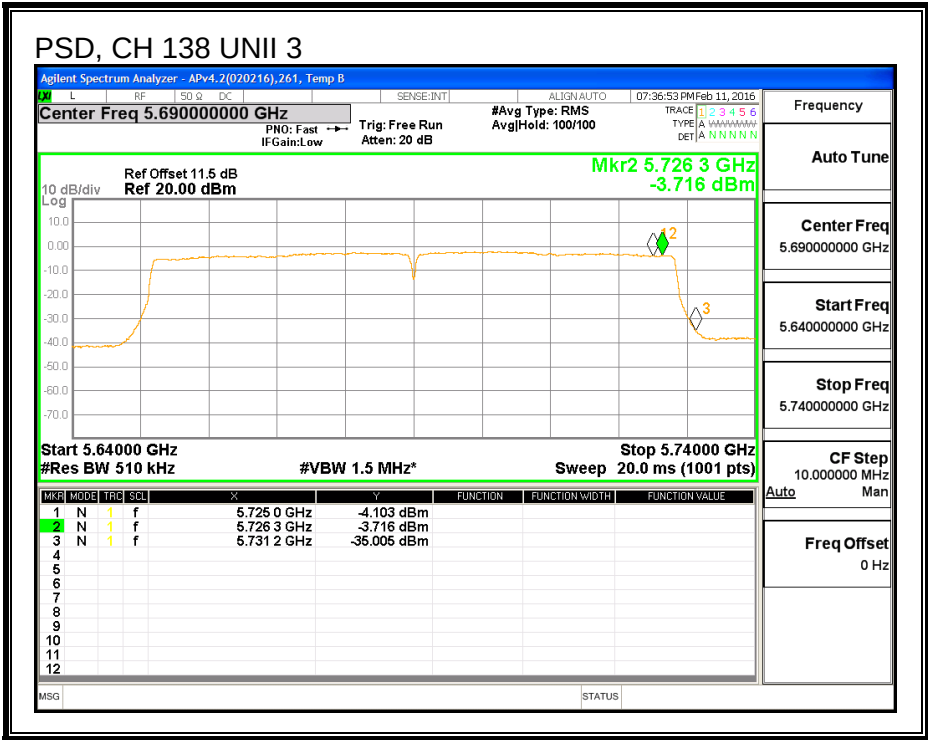
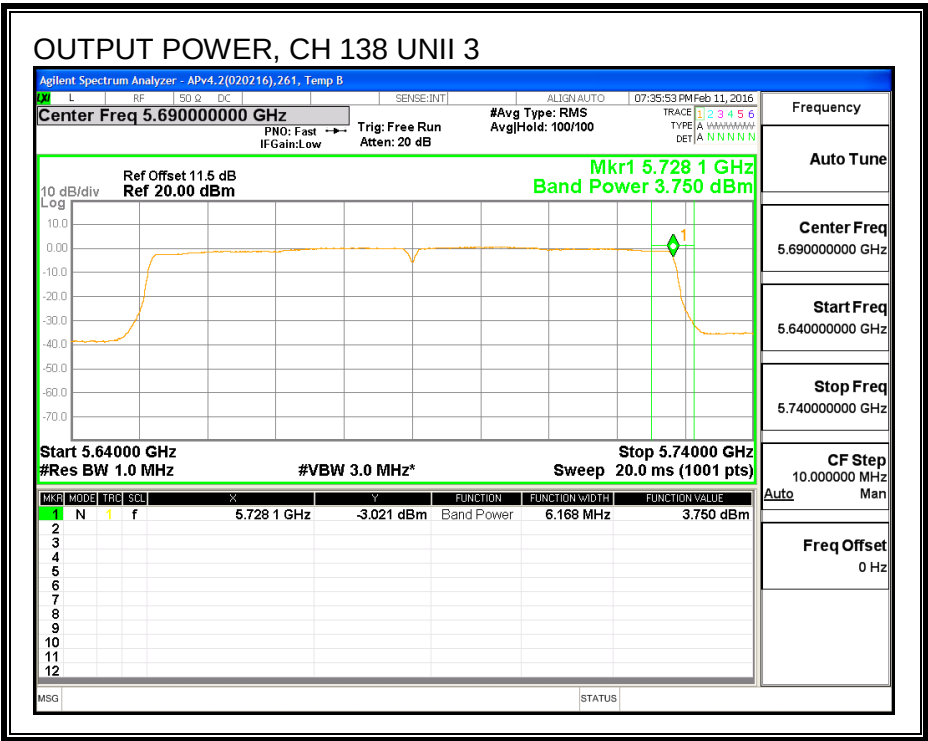
Duty Cycle CF (dB)	0.16	Included in Calculations of Corr'd Power & PSD
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	3.75	3.91	30.00	-26.09

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	-3.72	-3.56	30.00	-33.56



8.51.6. 6 dB BANDWIDTH

LIMITS

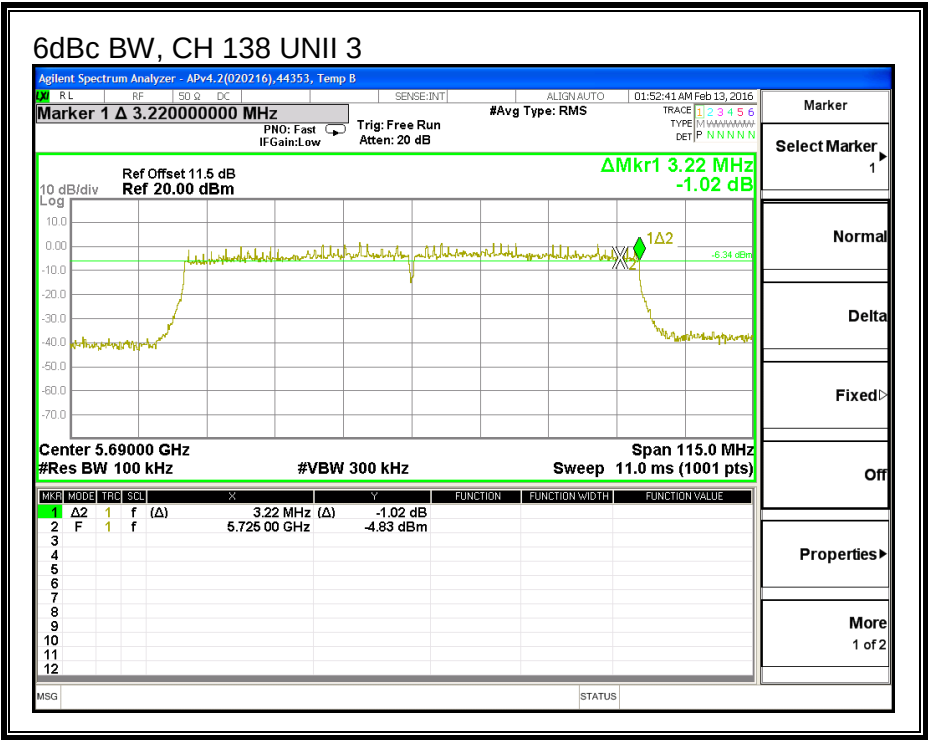
FCC §15.407 (e)

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

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)
High	5690	3.22

6 dB BANDWIDTH



8.52. 802.11ac VHT80 CHAIN 1 MODE IN THE 5.6 GHz BAND

8.52.1. 26 dB BANDWIDTH

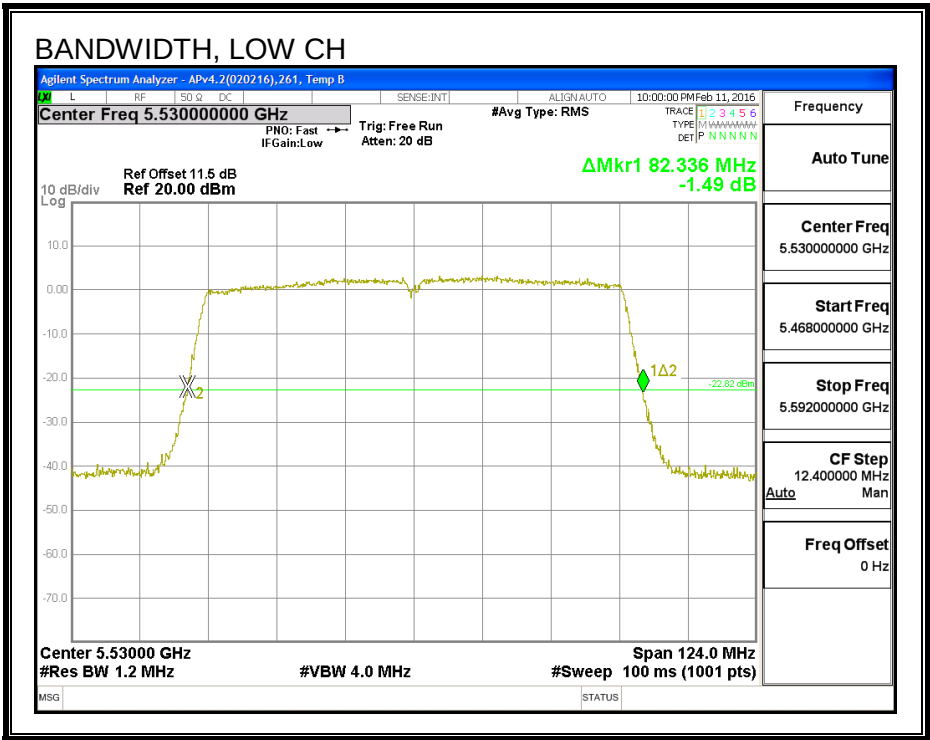
LIMITS

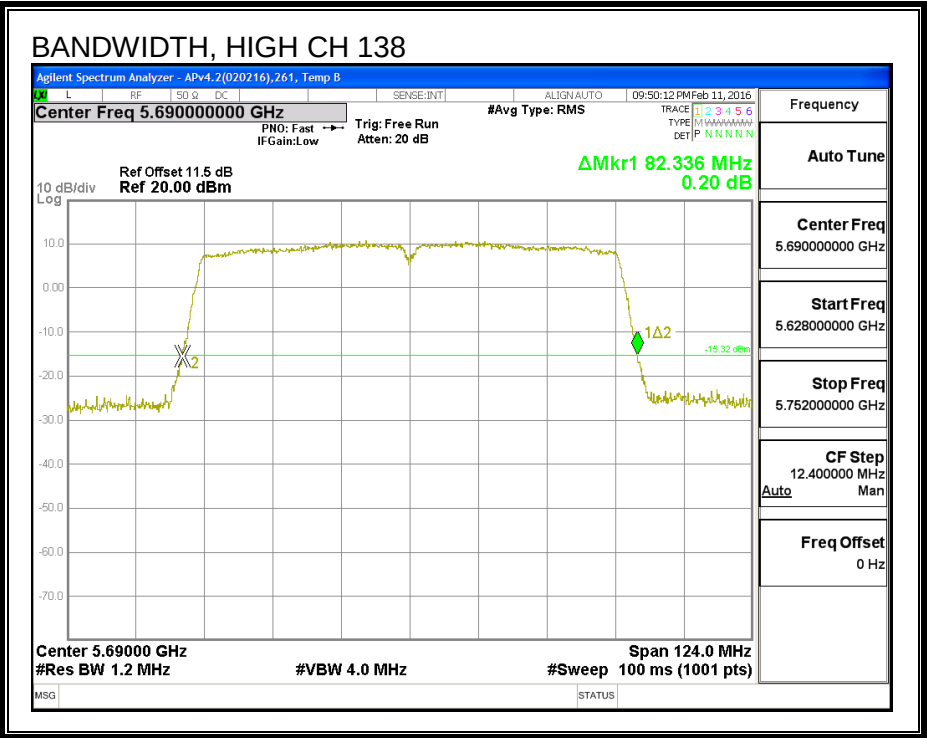
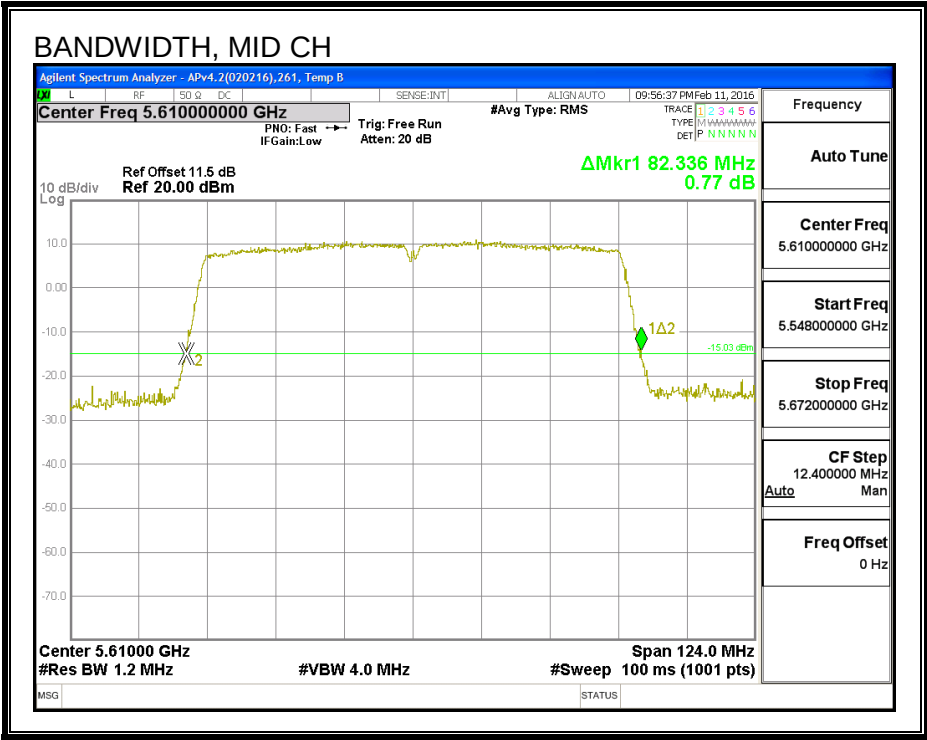
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5530	82.34
Mid	5610	82.34
High	5690	82.34

26 dB BANDWIDTH





8.52.2. 99% BANDWIDTH

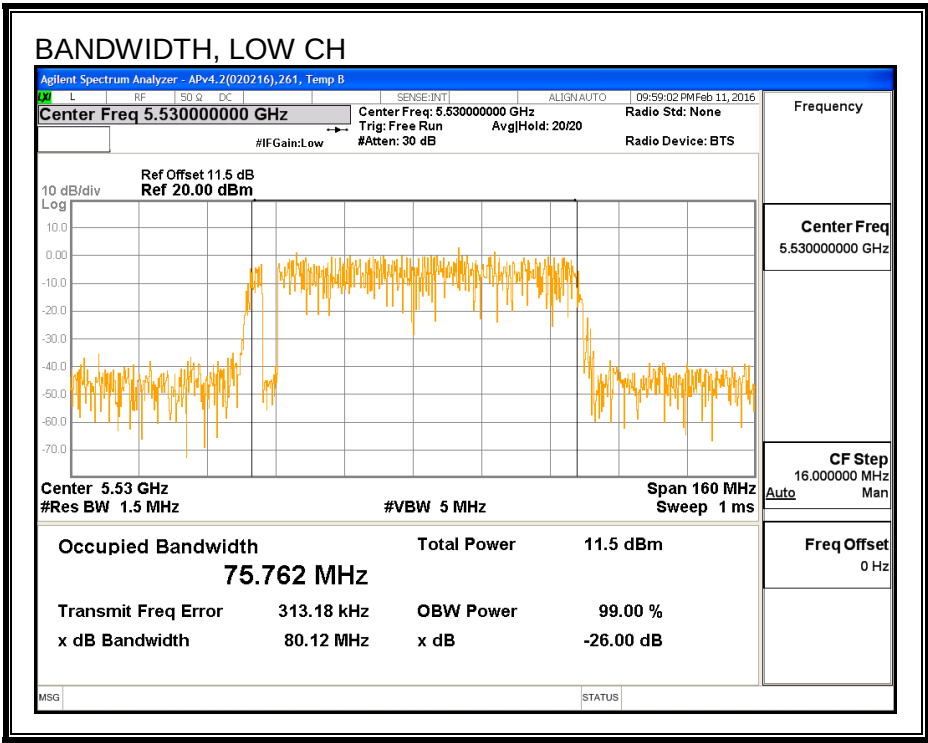
LIMITS

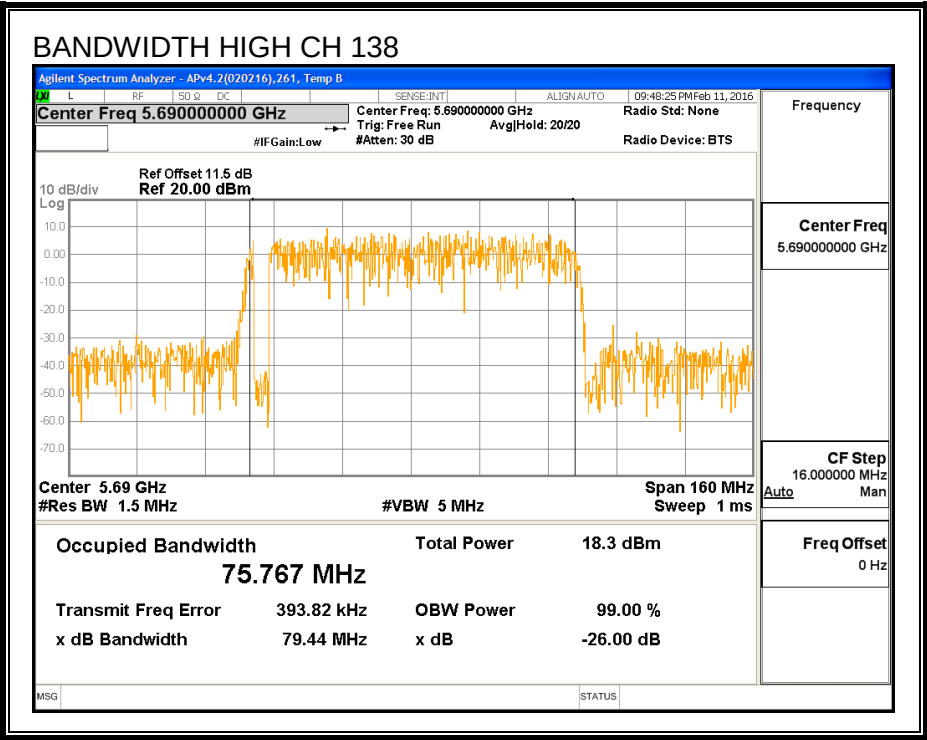
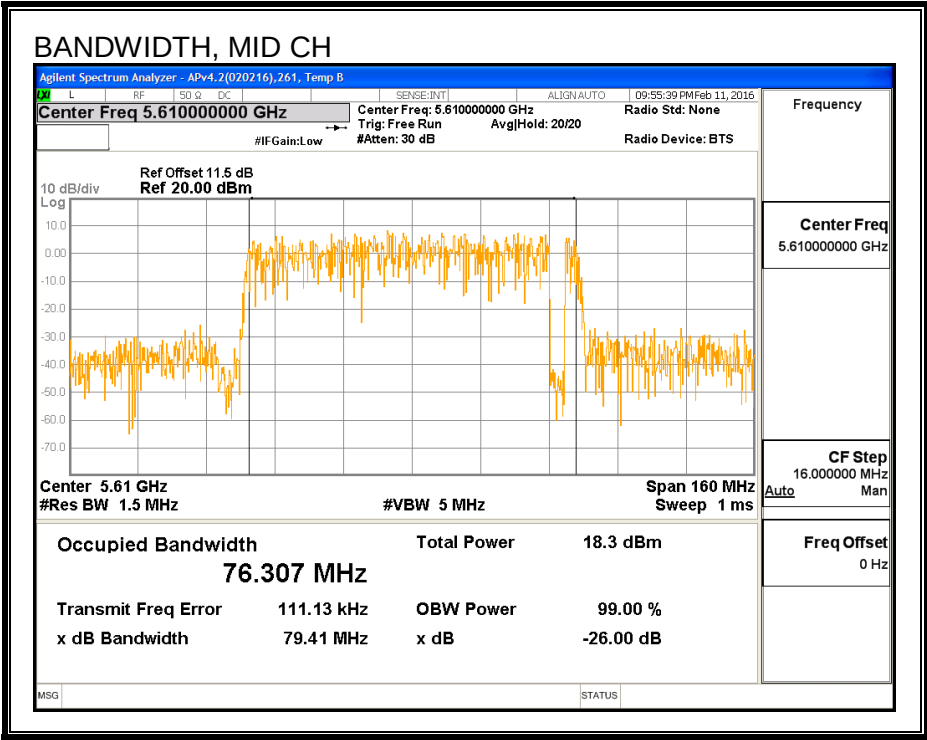
None; for reporting purposes only.

RESULTS

Frequency (MHz)	99% Bandwidth (MHz)
5530	75.762
5610	76.307
5690	75.767

99% BANDWIDTH





8.52.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Low	5530	10.42
Mid	5610	17.86
High	5690	17.99

8.52.4. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

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

TEST PROCEDURE

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

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

DIRECTIONAL ANTENNA GAIN

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

RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5530	82.34	75.762	4.57	24.00	11.00
High	5610	82.34	76.307	4.57	24.00	11.00

Duty Cycle CF (dB)	0.16	Included in Calculations of Corr'd PSD
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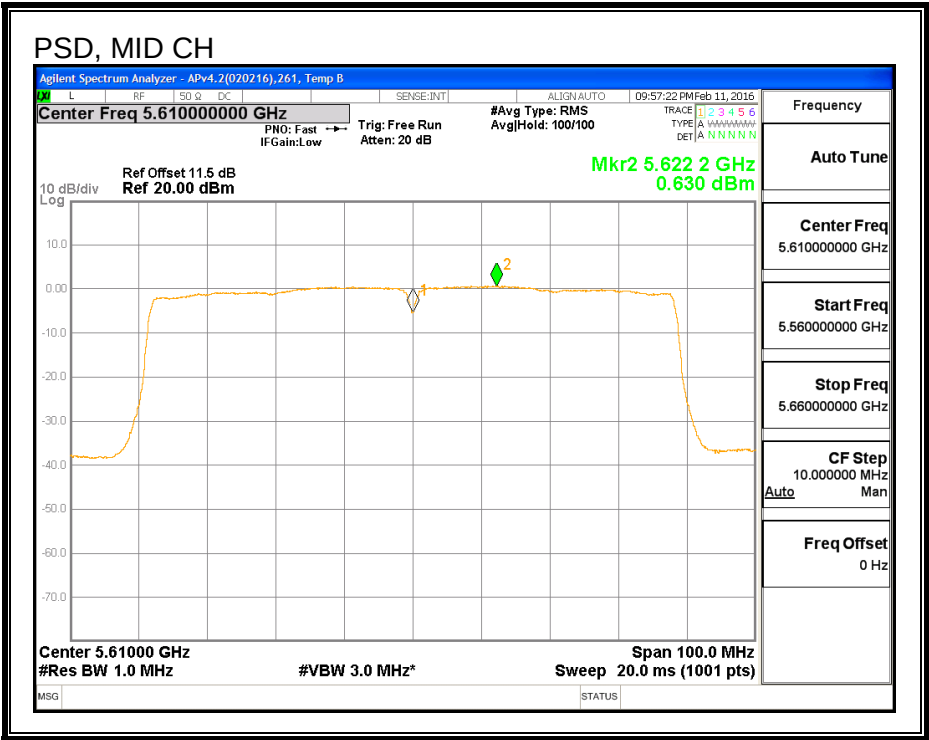
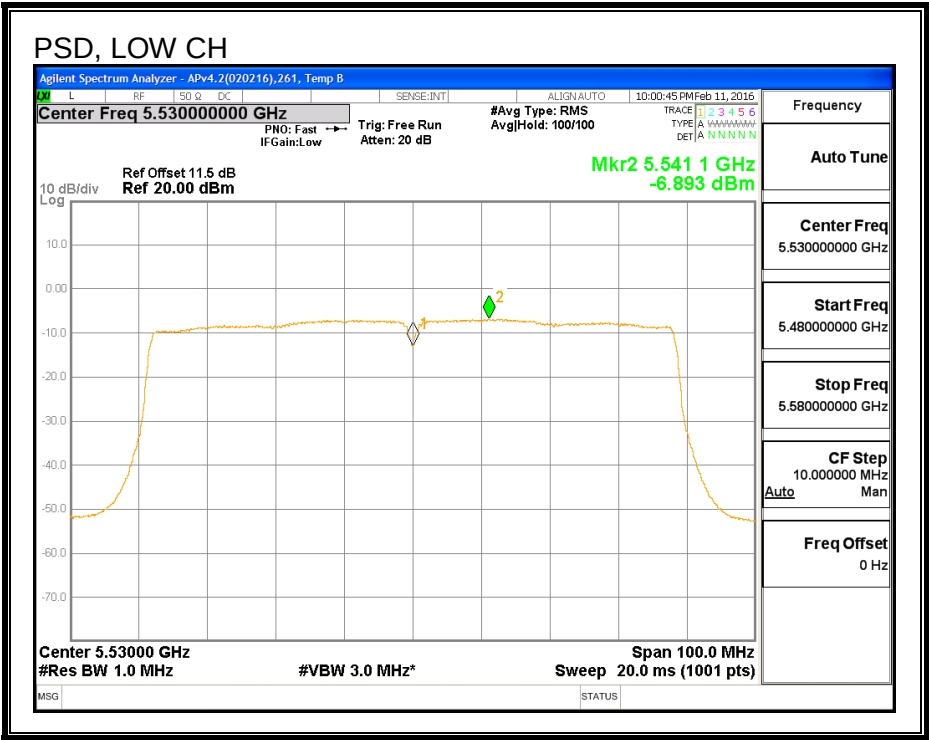
Output Power Results

Channel	Frequency (MHz)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5530	10.42	10.42	24.00	-13.58
High	5610	17.86	17.86	24.00	-6.14

PSD Results

Channel	Frequency (MHz)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5530	-6.89	-6.73	11.00	-17.73
High	5610	0.63	0.79	11.00	-10.21

PSD



8.52.5. STRADDLE CHANNEL 138 RESULTS (FCC)

UNII-2C BAND

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
138	5690	76.17	4.57	4.57	24.00	11.00

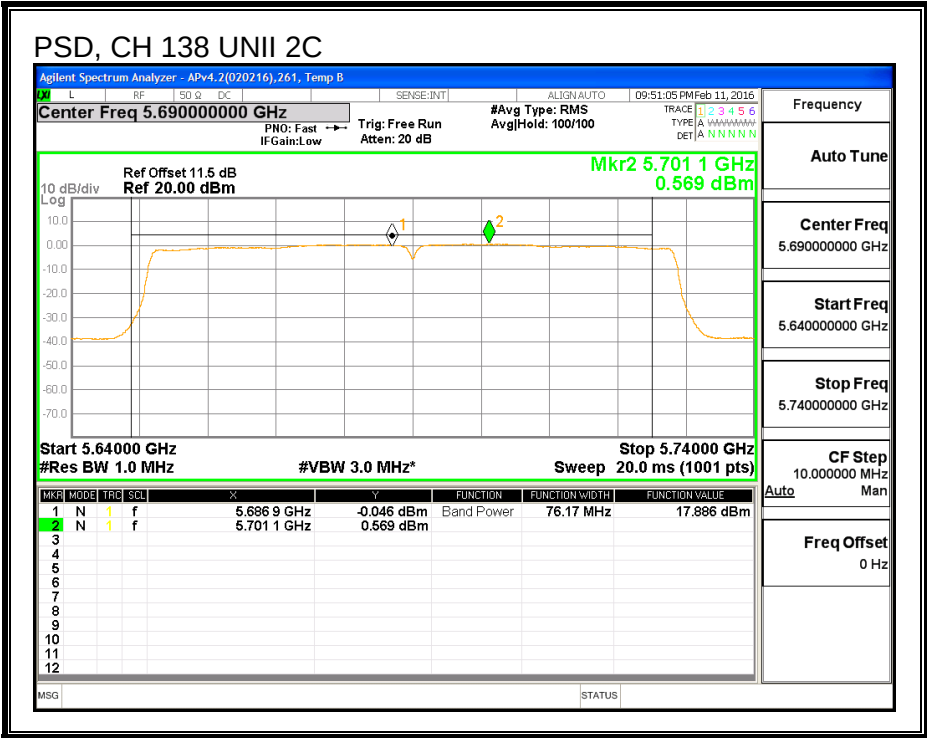
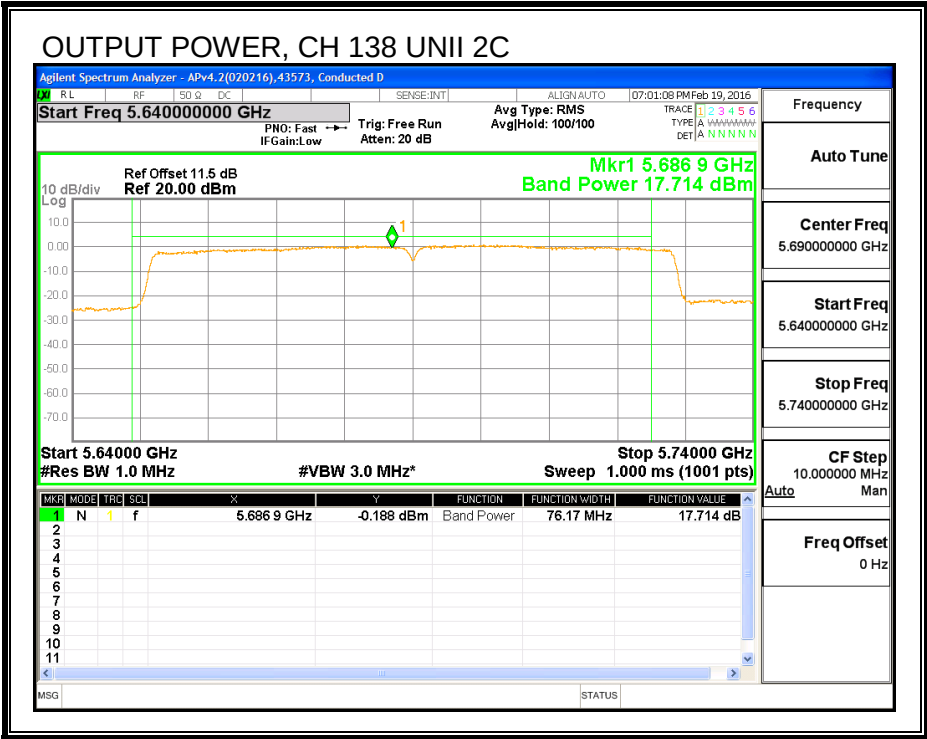
Duty Cycle CF (dB)	0.16	Included in Calculations of Corr'd Power & PSD
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Output Power Results

Channel	Frequency (MHz)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	17.71	17.87	24.00	-6.13

PSD Results

Channel	Frequency (MHz)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	0.57	0.73	11.00	-10.27



UNII-3 BAND

Antenna Gain and Limit

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
138	5690	6.17	4.57	30.00	30.00

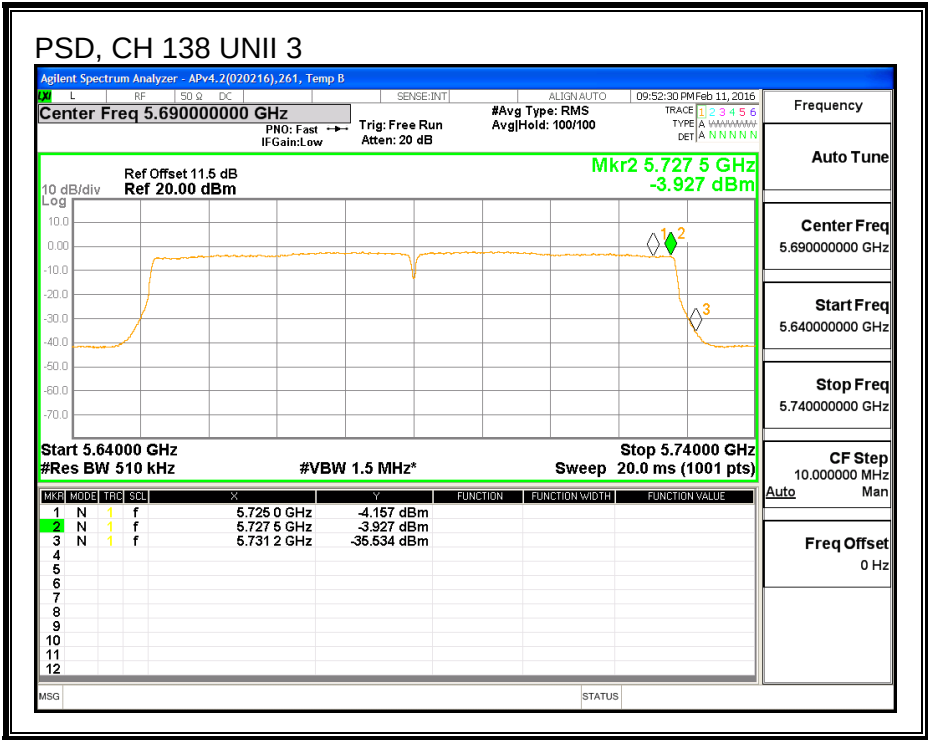
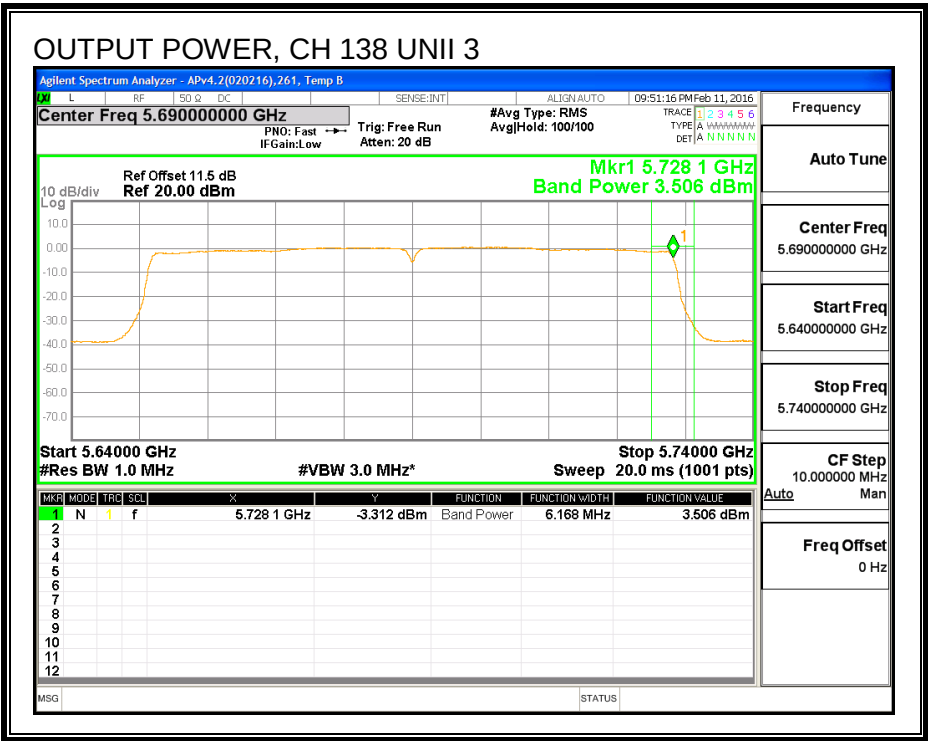
Duty Cycle CF (dB)	0.16	Included in Calculations of Corr'd Power & PSD
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Output Power Results

Channel	Frequency (MHz)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	3.51	3.67	30.00	-26.33

PSD Results

Channel	Frequency (MHz)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	-3.93	-3.77	30.00	-33.77



8.52.6. 6 dB BANDWIDTH

LIMITS

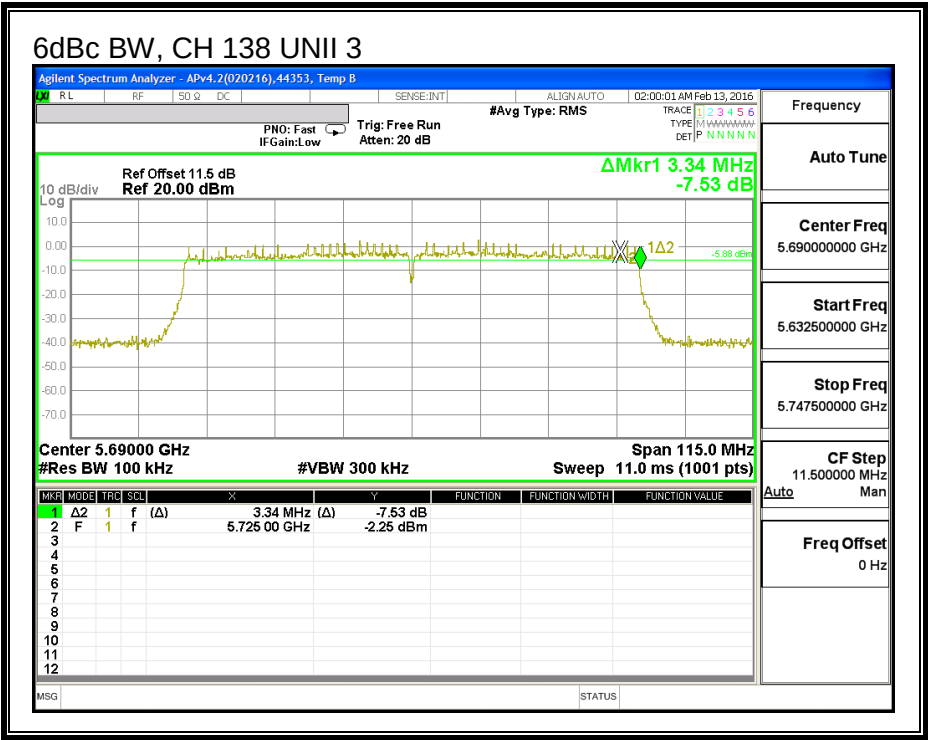
FCC §15.407 (e)

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

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)
High	5690	3.34

6 dB BANDWIDTH



8.53. 802.11ac VHT80 2Tx CDD MODE IN THE 5.6 GHz BAND

8.53.1. 26 dB BANDWIDTH

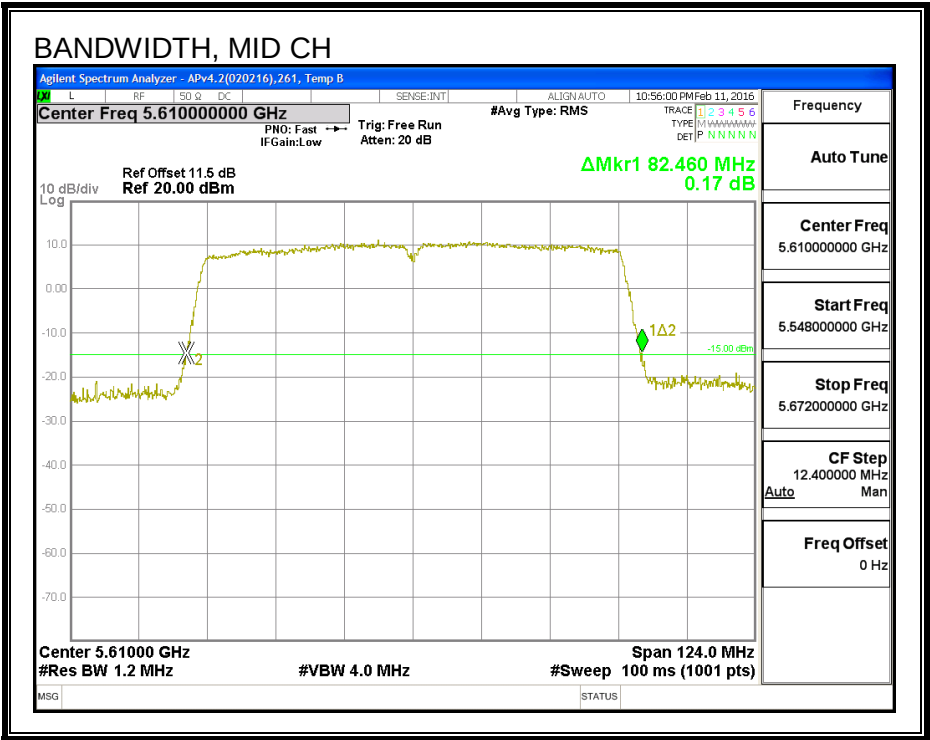
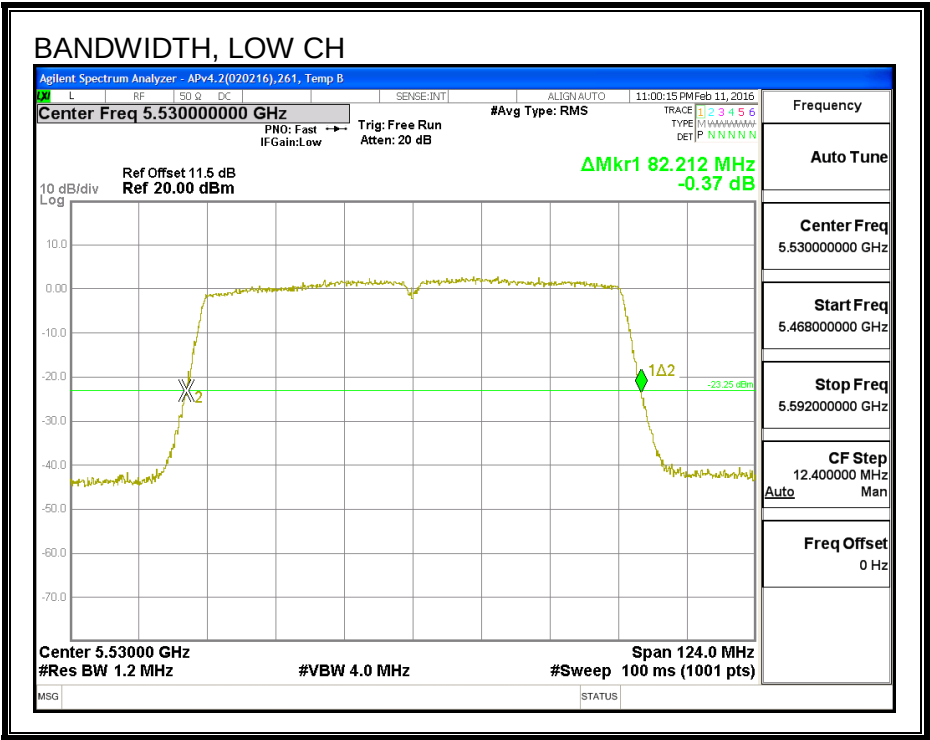
LIMITS

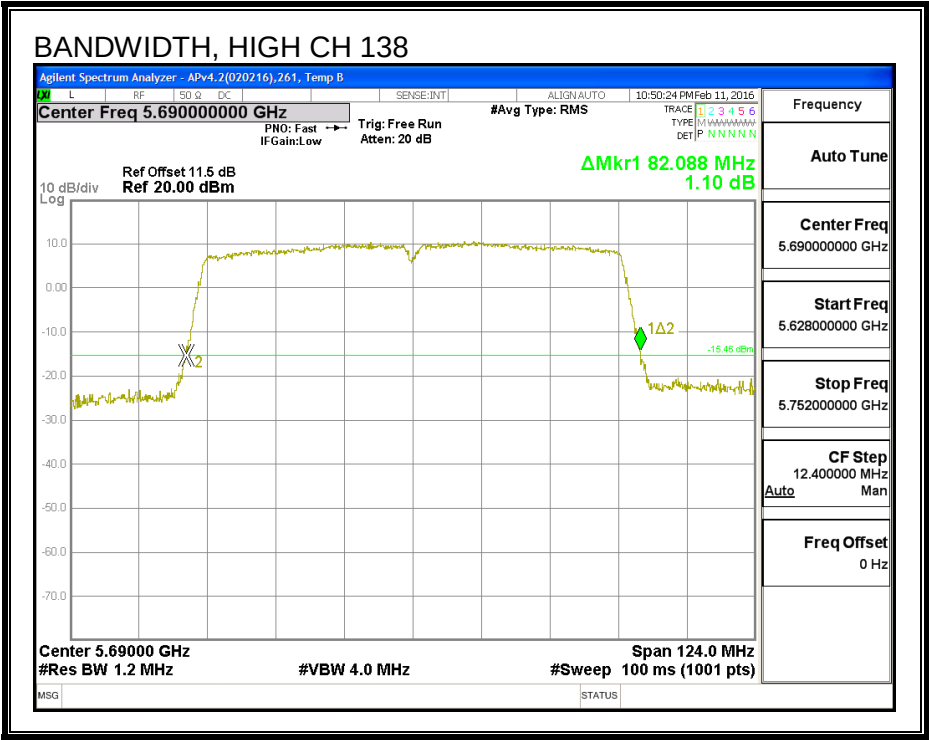
None; for reporting purposes only.

RESULTS

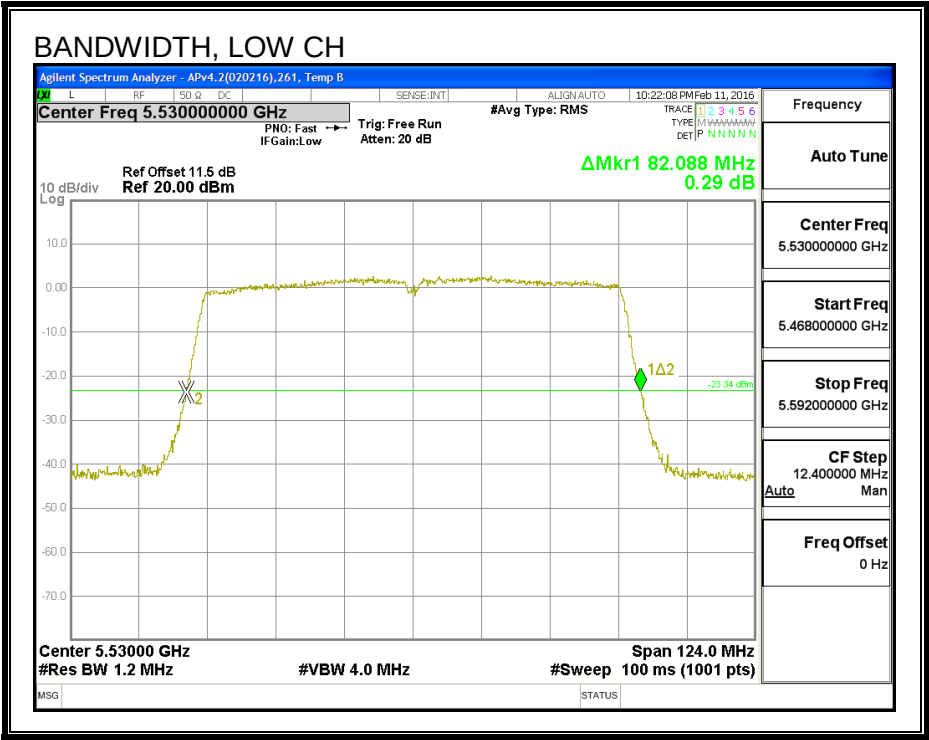
Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)
Low	5530	82.21	82.09
Mid	5610	82.46	82.55
High	5690	82.09	81.92

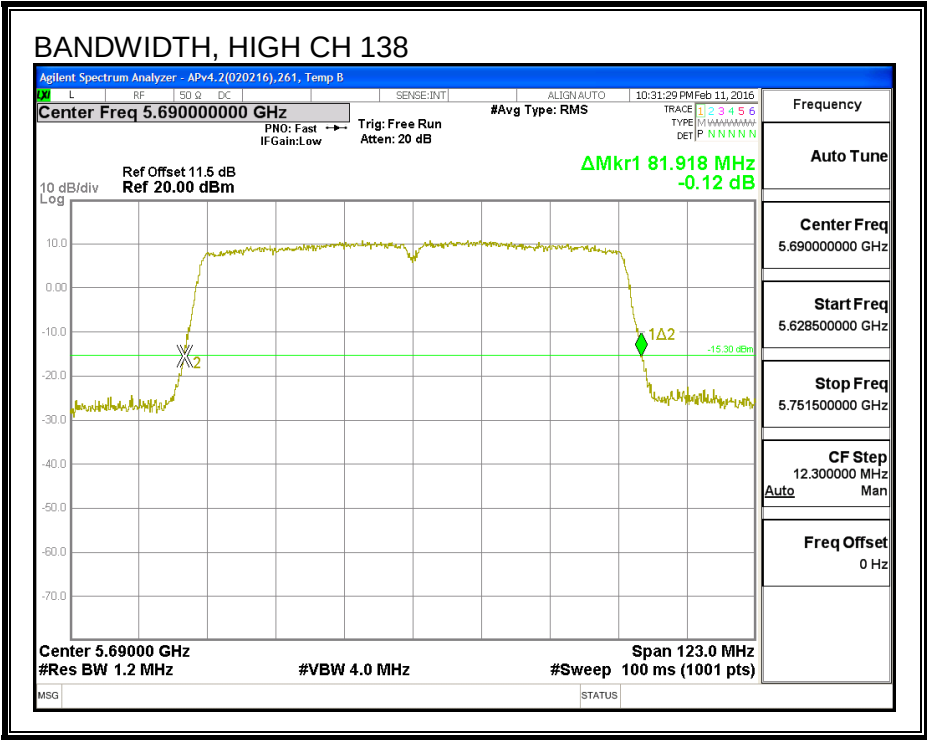
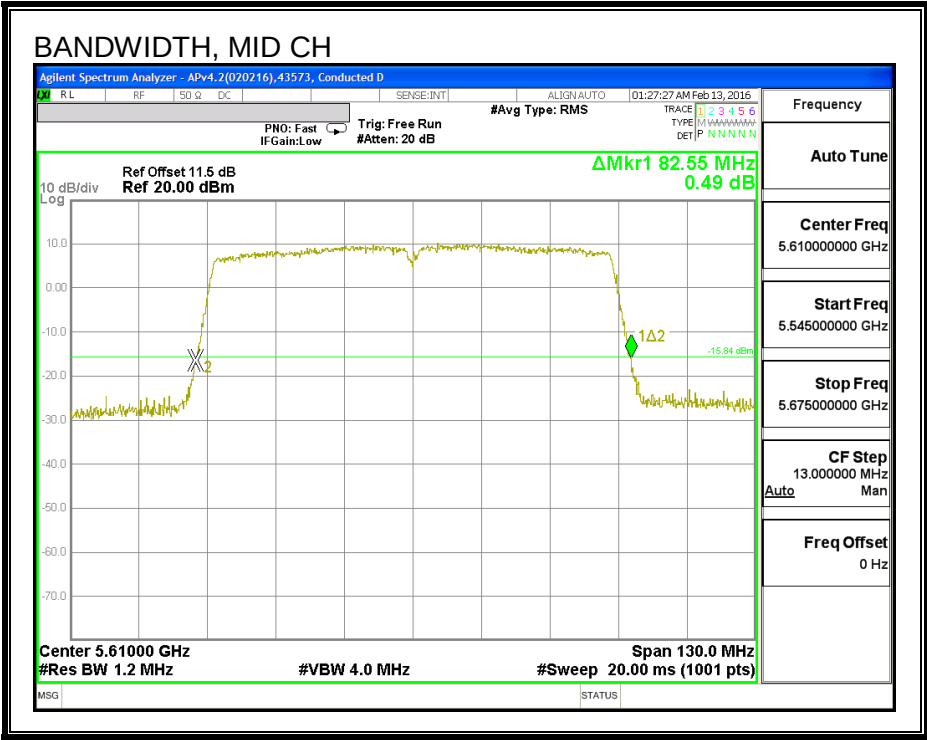
26 dB BANDWIDTH, CHAIN 0





26 dB BANDWIDTH, CHAIN 1





8.53.2. 99% BANDWIDTH

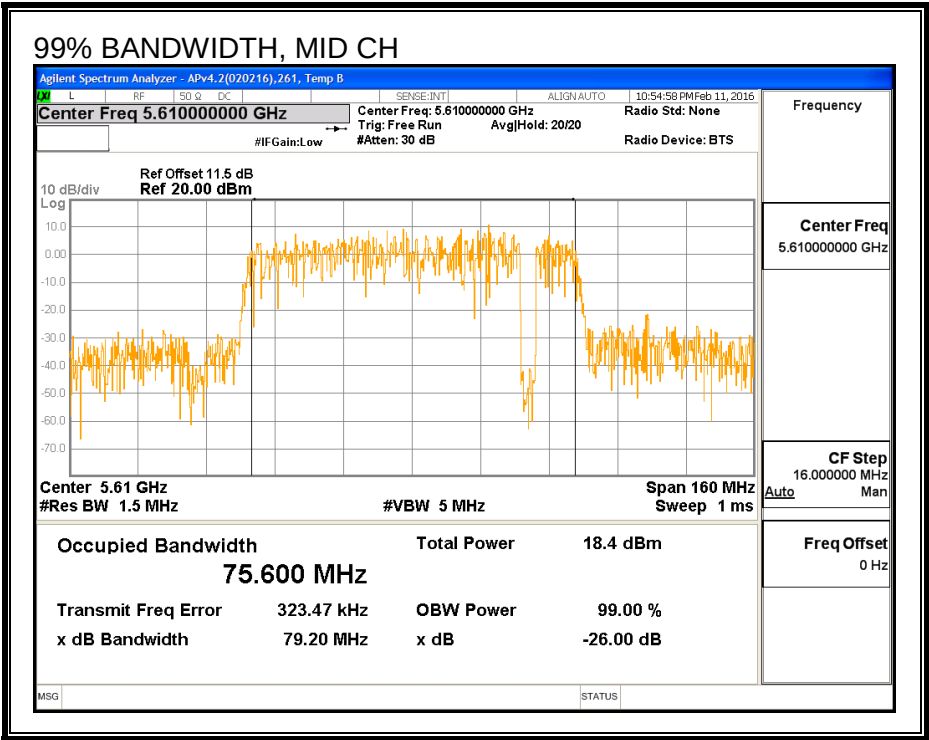
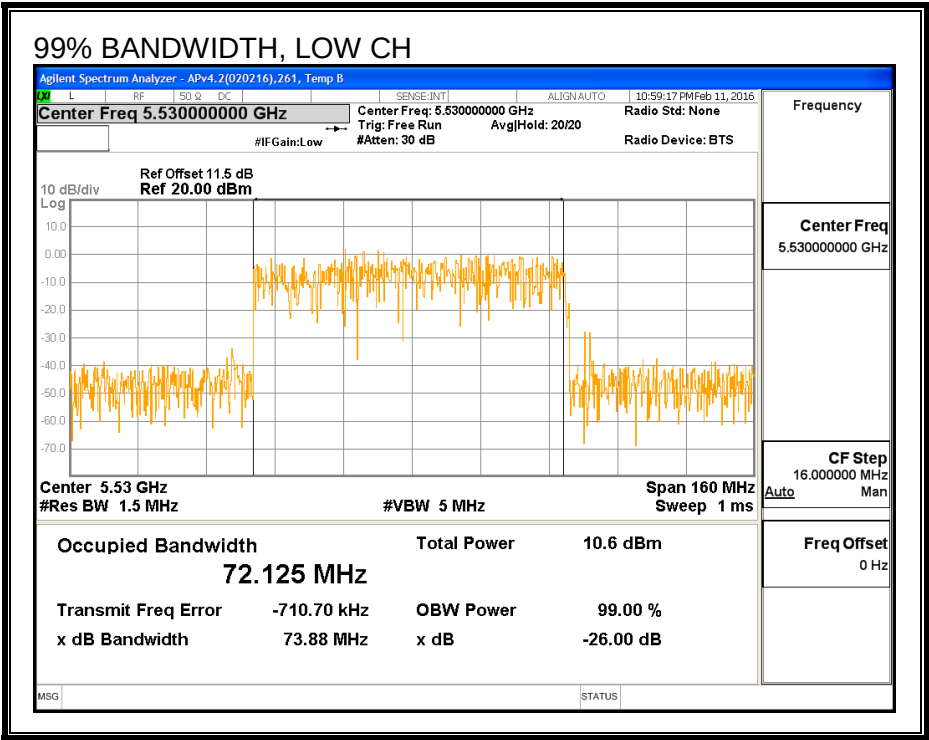
LIMITS

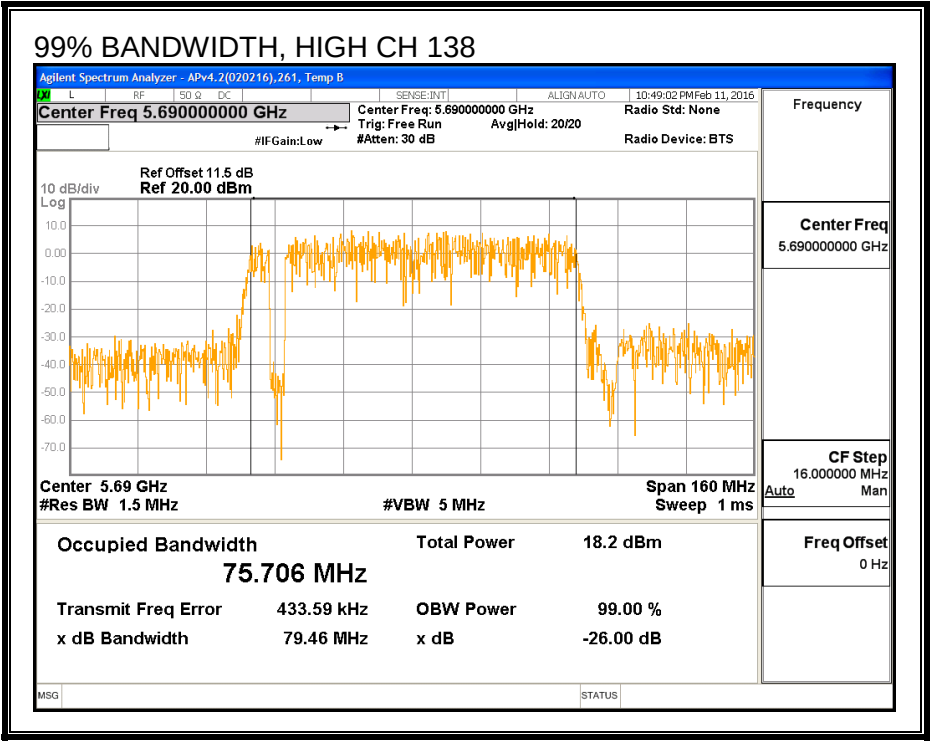
None; for reporting purposes only.

RESULTS

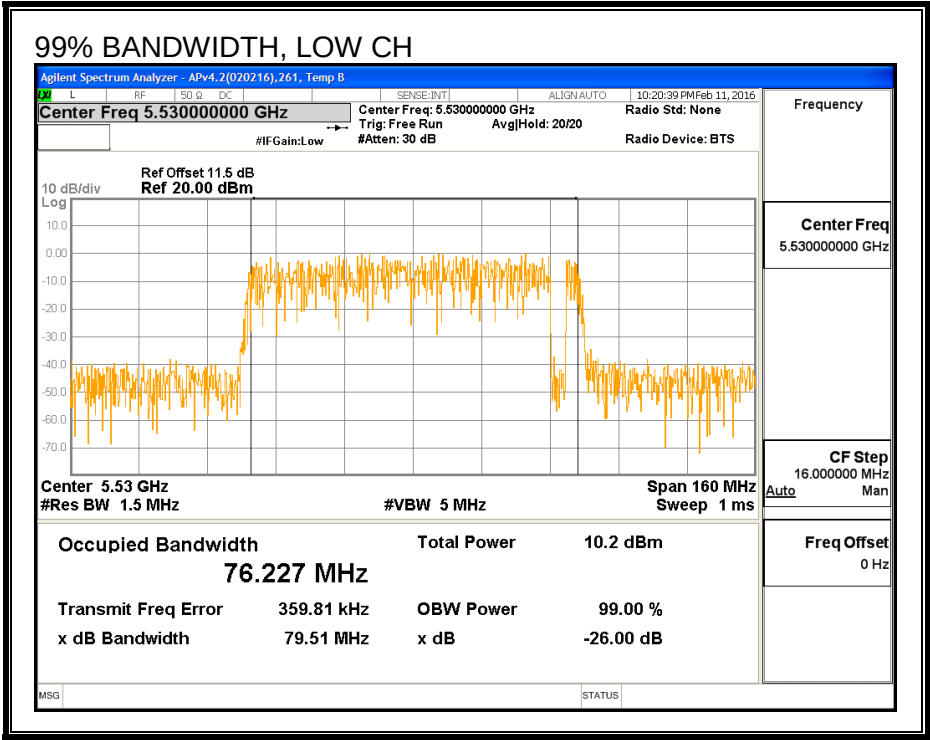
Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low	5530	72.125	76.227
Mid	5610	75.600	72.575
High	5690	75.706	75.893

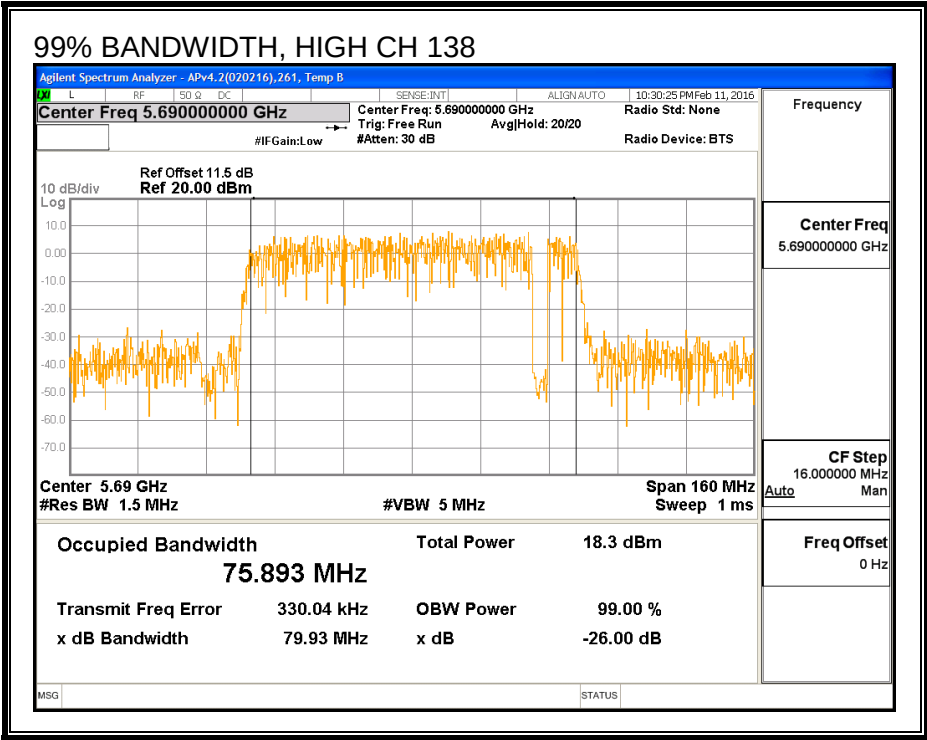
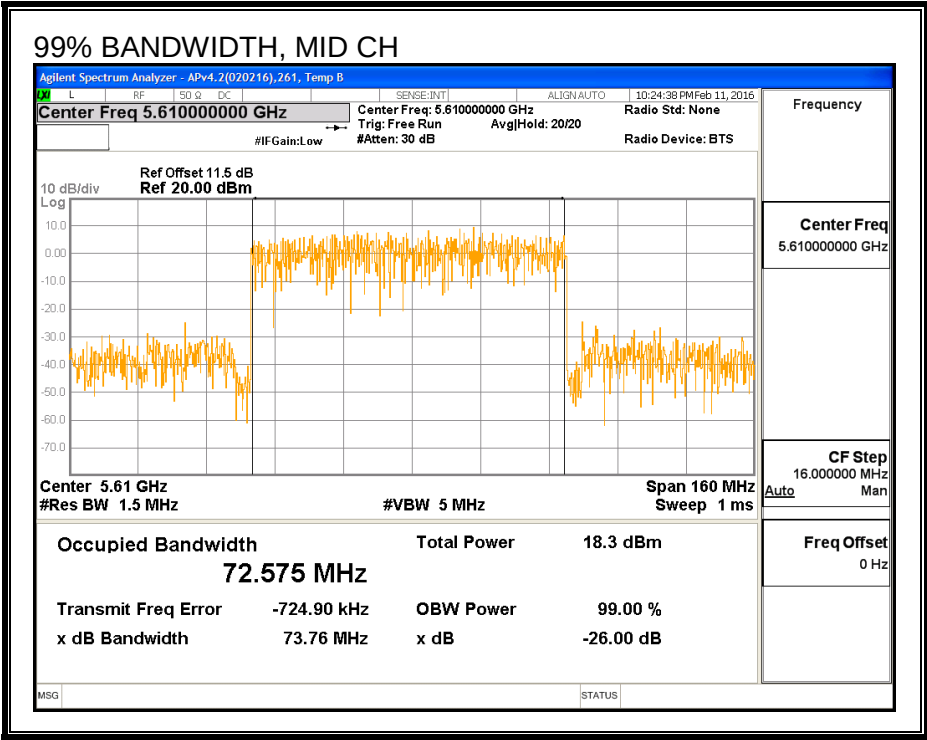
99% BANDWIDTH, CHAIN 0





99% BANDWIDTH, CHAIN 1





8.53.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Channel	Frequency (MHz)	Chain 0 Power (dBm)	Chain 1 Power (dBm)	Total Power (dBm)
Low	5530	9.98	9.89	12.95
Mid	5610	18.00	17.92	20.97
High	5690	17.88	17.90	20.90

8.53.4. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

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

TEST PROCEDURE

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

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

DIRECTIONAL ANTENNA GAIN

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
5.00	4.57	4.79

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)
5.00	4.57	7.80

RESULTS

Bandwidth, Antenna Gain and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5530	82.21	76.227	4.79	7.80	24.00	9.20
High	5610	82.55	75.600	4.79	7.80	24.00	9.20

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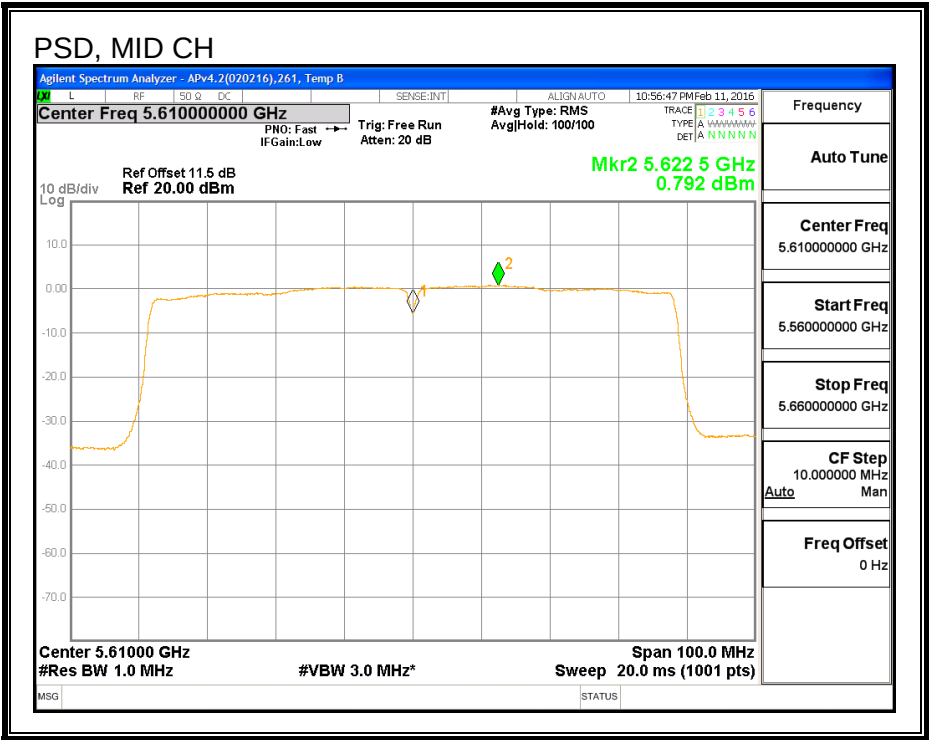
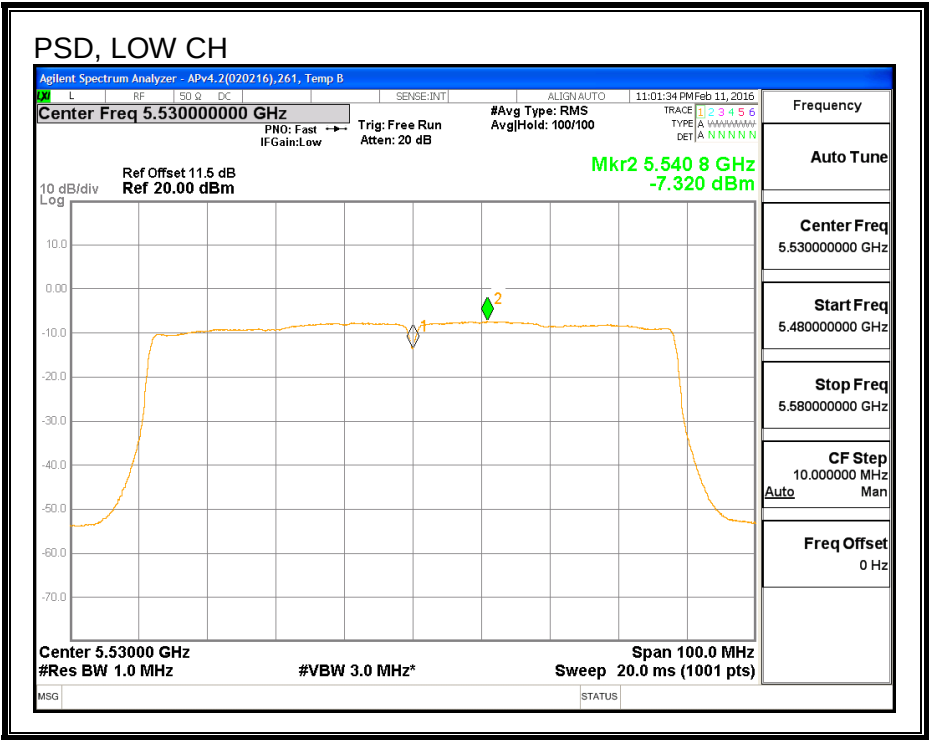
Output Power Results

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	5530	9.98	9.89	12.95	24.00	-11.05
High	5610	18.00	17.92	20.97	24.00	-3.03

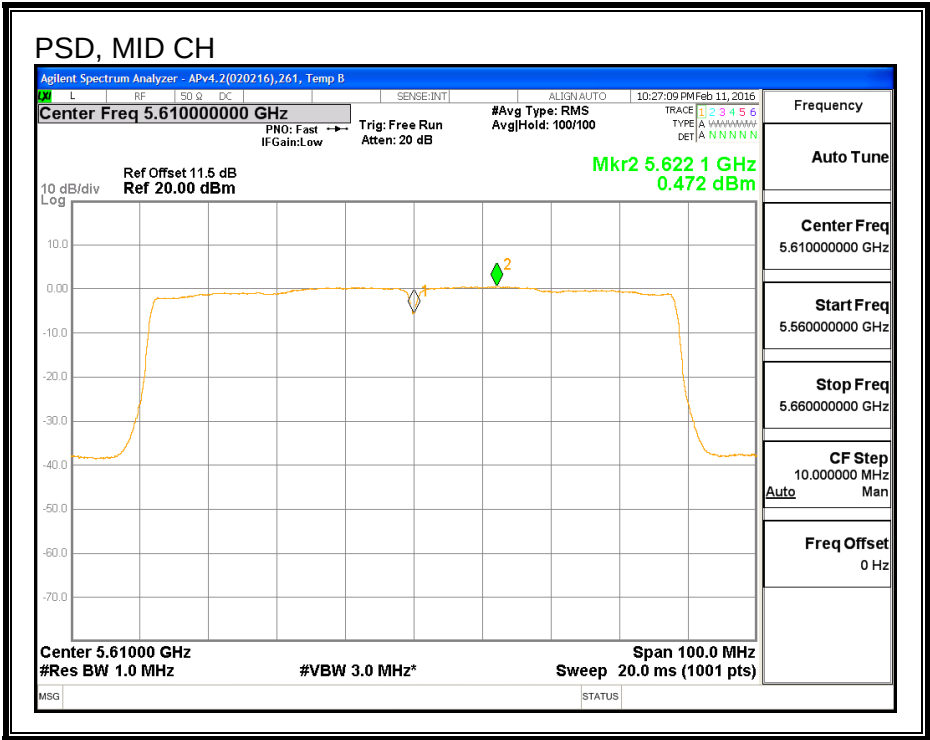
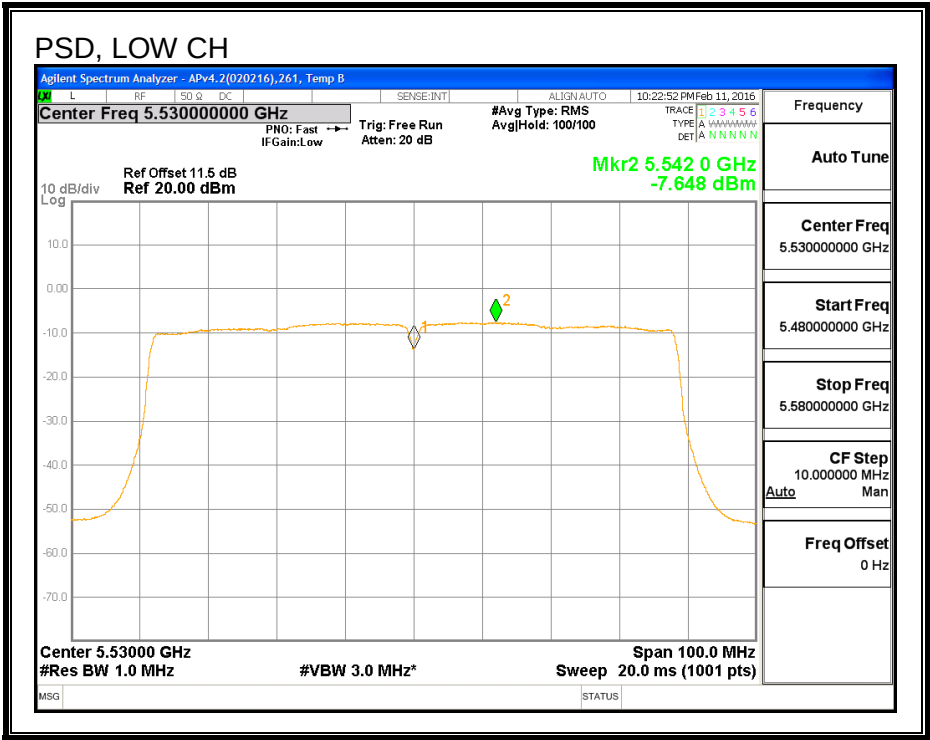
PSD Results

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	5530	-7.32	-7.65	-4.26	9.20	-13.46
High	5610	0.79	0.47	3.86	9.20	-5.34

PSD, CHAIN 0



PSD, CHAIN 1



8.53.5. STRADDLE CHANNEL 138 RESULTS (FCC)

UNII-2C BAND

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
138	5690	76.04	4.79	7.80	24.00	9.20

Duty Cycle CF (dB)	0.21	Included in Calculations of Corr'd Power & PSD
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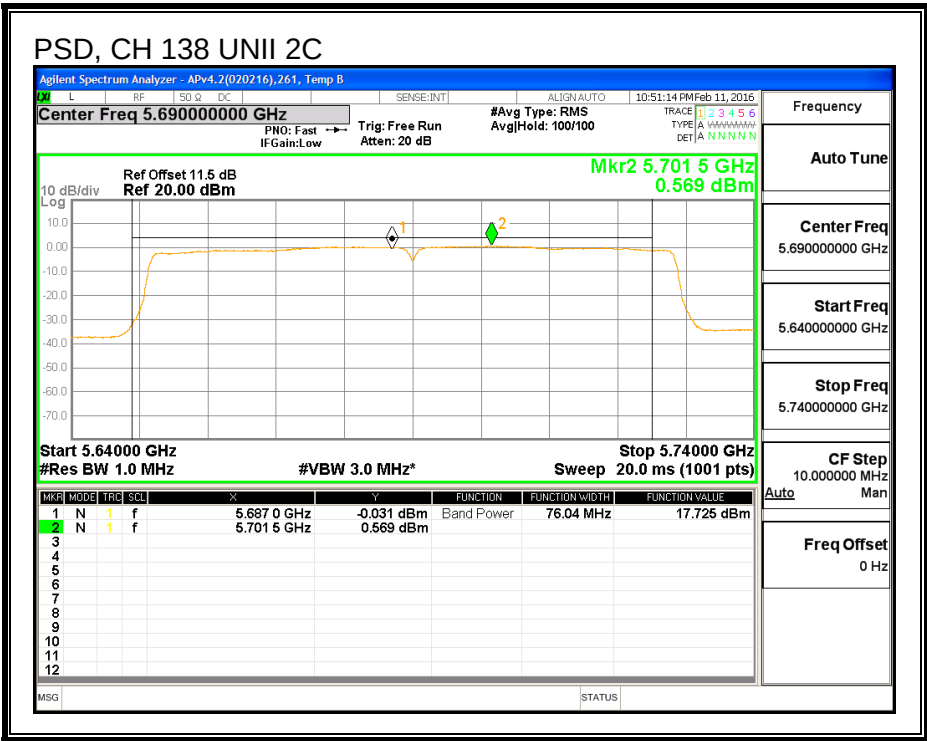
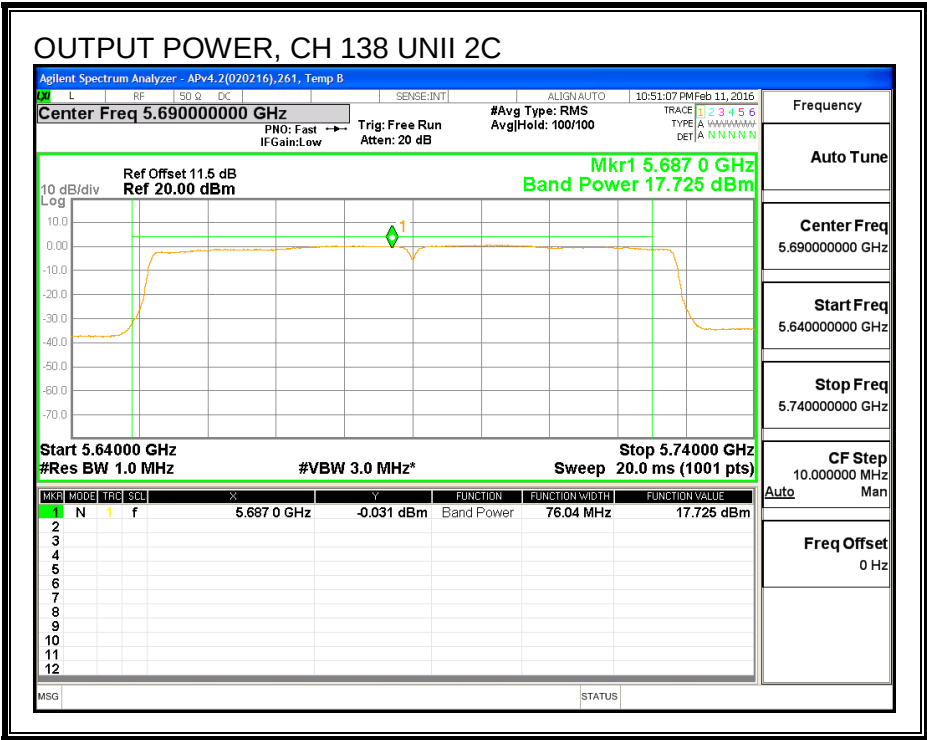
Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	17.73	17.89	21.03	24.00	-2.97

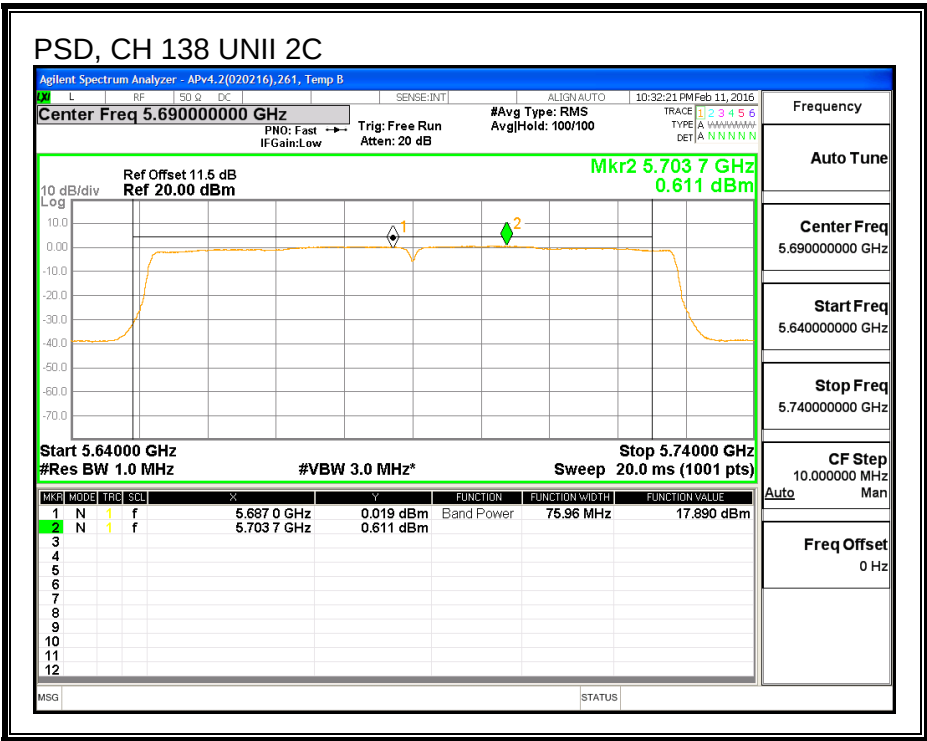
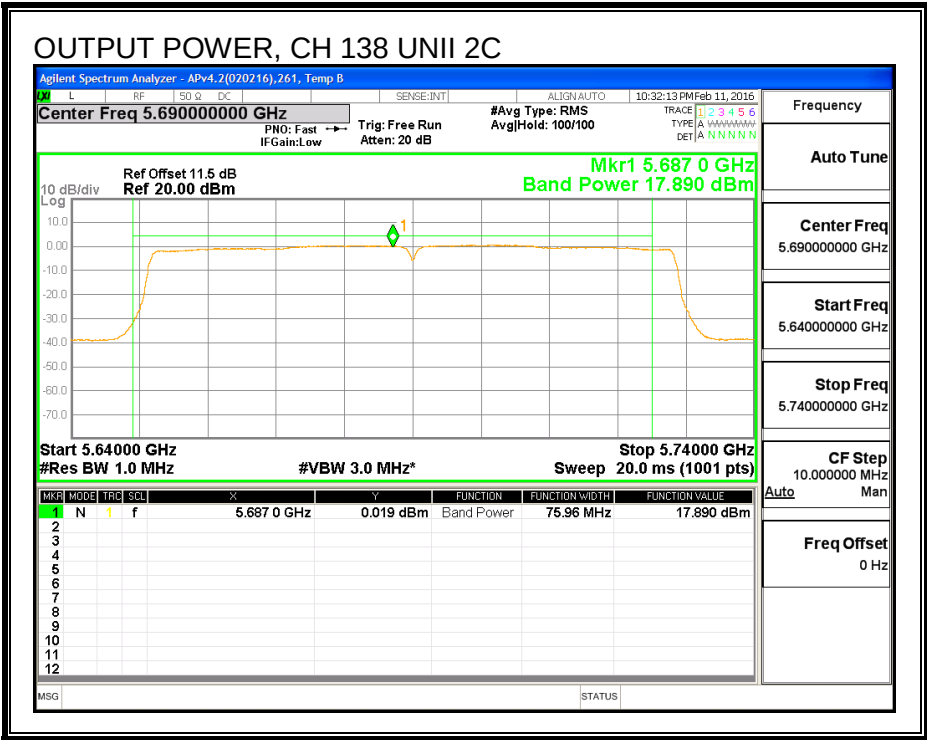
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	0.57	0.61	3.81	9.20	-5.39

CHAIN 0



CHAIN 1



UNII-3 BAND

Antenna Gain and Limit

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
138	5690	6.04	4.79	7.80	30.00	28.20

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

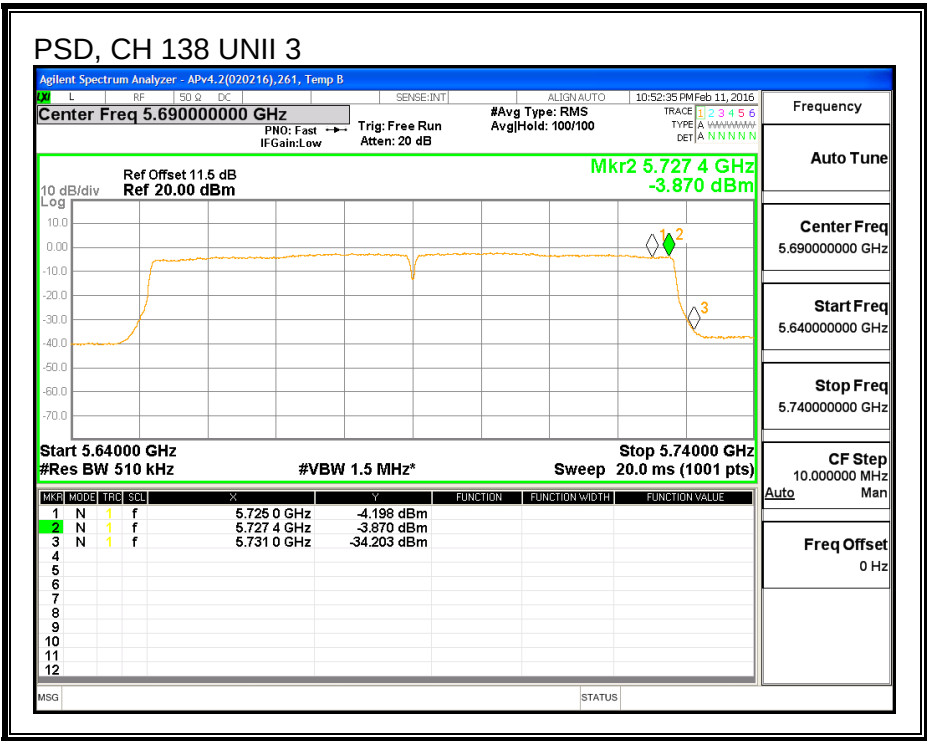
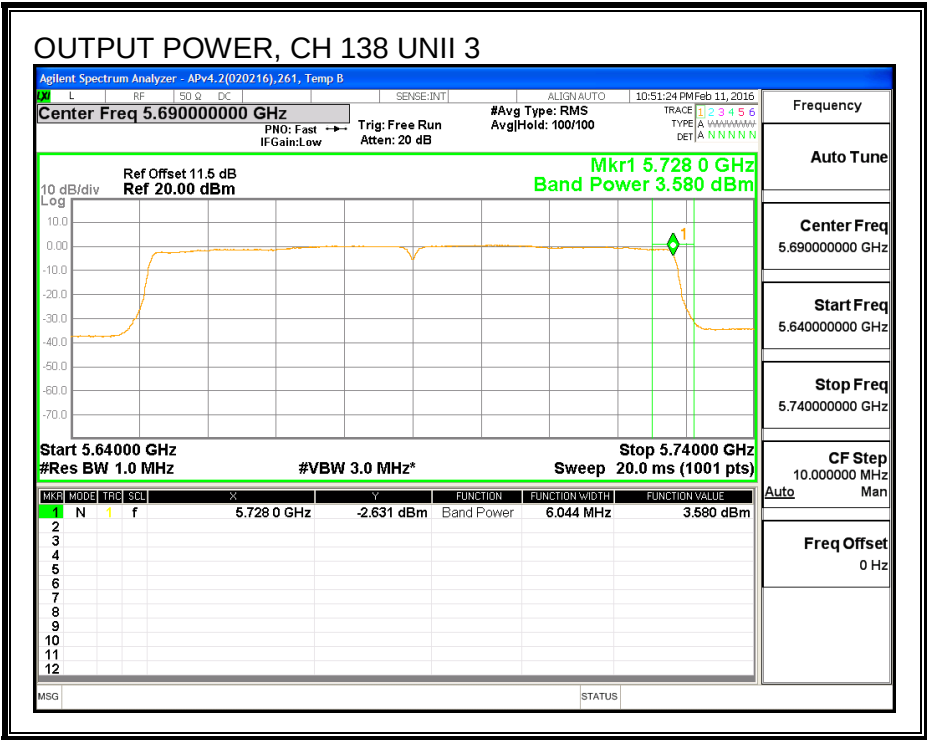
Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	3.58	3.52	6.77	30.00	-23.23

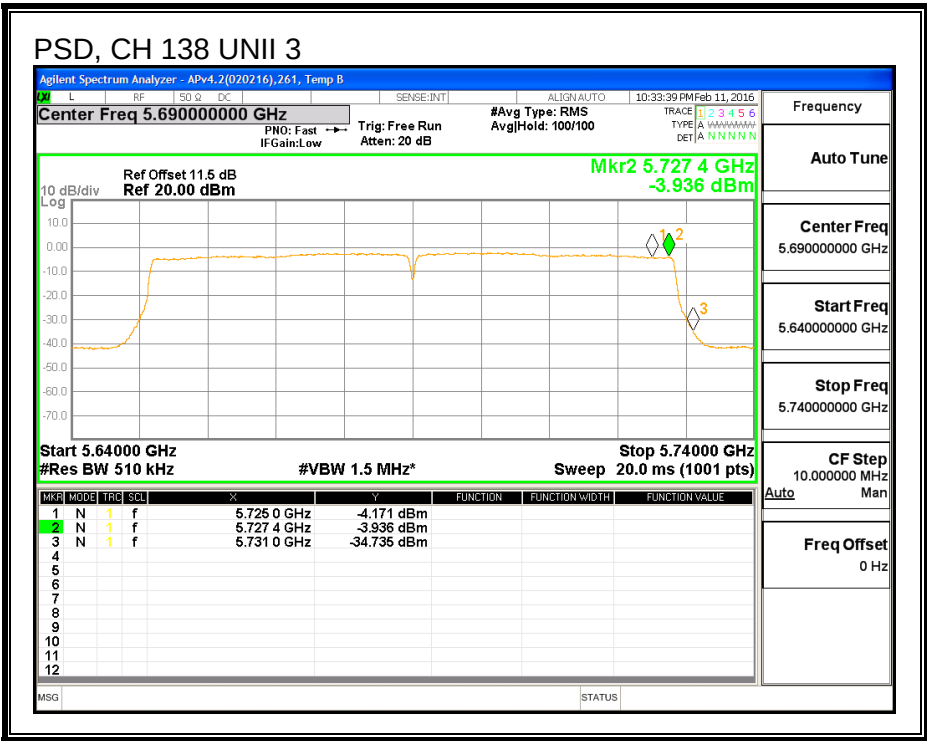
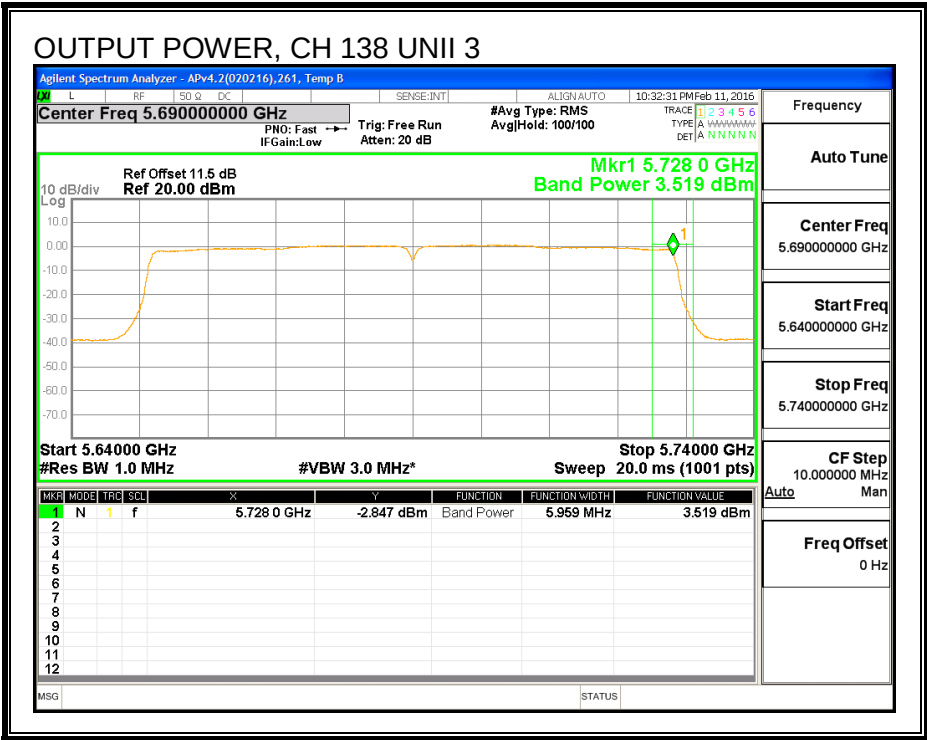
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	-3.87	-3.94	-0.68	28.20	-28.88

CHAIN 0



CHAIN 1



8.53.6. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

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)
High	5690	3.22	3.34

6dBc BW, CH 138 UNII 3

Agilent Spectrum Analyzer - APv4.2(020216),44353, Temp B

RL RF 50 Ω DC SENSE:INT ALIGN: AUTO 01:54:58 AM Feb 13, 2016

PN0: Fast IF Gain: Low Trig: Free Run #Avg Type: RMS

TRACE 1 2 3 4 5 6 TYPE: FFFFFFFF DEF: P N N N N N

Ref Offset 11.5 dB Ref 20.00 dBm

ΔMkr1 3.22 MHz -5.31 dB

1Δ2

-6.54 dBm

Center 5.69000 GHz #Res BW 100 kHz #VBW 300 kHz Span 115.0 MHz Sweep 11.0 ms (1001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	Δ2	1	f	(Δ)	3.22 MHz (Δ)	-5.31 dB		
2	F	1	f		5.725 00 GHz	-0.25 dBm		
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								

MSG STATUS

Frequency

Auto Tune

Center Freq 5.690000000 GHz

Start Freq 5.632500000 GHz

Stop Freq 5.747500000 GHz

CF Step 11.500000 MHz

Auto Man

Freq Offset 0 Hz

Agilent Spectrum Analyzer - APv4.2(020216),44353, Temp B

RL RF 50 Ω DC SENSE:INT #Avg Type: RMS D1:58:50 AM Feb 13, 2016

PNO: Fast IF Gain: Low Trig: Free Run Atten: 20 dB TRACE 1 2 3 4 5 6 TYPE M M M M M M M M DEF P N N N N N N

Ref Offset 11.5 dB Ref 20.00 dBm ΔMkr1 3.34 MHz -5.40 dB

10 dB/div Log

Center Freq 5.69000 GHz Span 115.0 MHz
#Res BW 100 kHz #VBW 300 kHz Sweep 11.0 ms (1001 pts)

Mkrf	MODE	TRC	SOL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	Δ2	1	f	(Δ)	3.34 MHz (Δ)	-5.40 dB		
2	F	1	f		5.725 00 GHz	-3.36 dBm		
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								

MFG STATUS

Frequency Auto Tune Center Freq 5.690000000 GHz Start Freq 5.632500000 GHz Stop Freq 5.747500000 GHz CF Step 11.500000 MHz Man Auto Freq Offset 0 Hz

8.54. 802.11ac VHT80 2Tx STBC MODE IN THE 5.6 GHz BAND

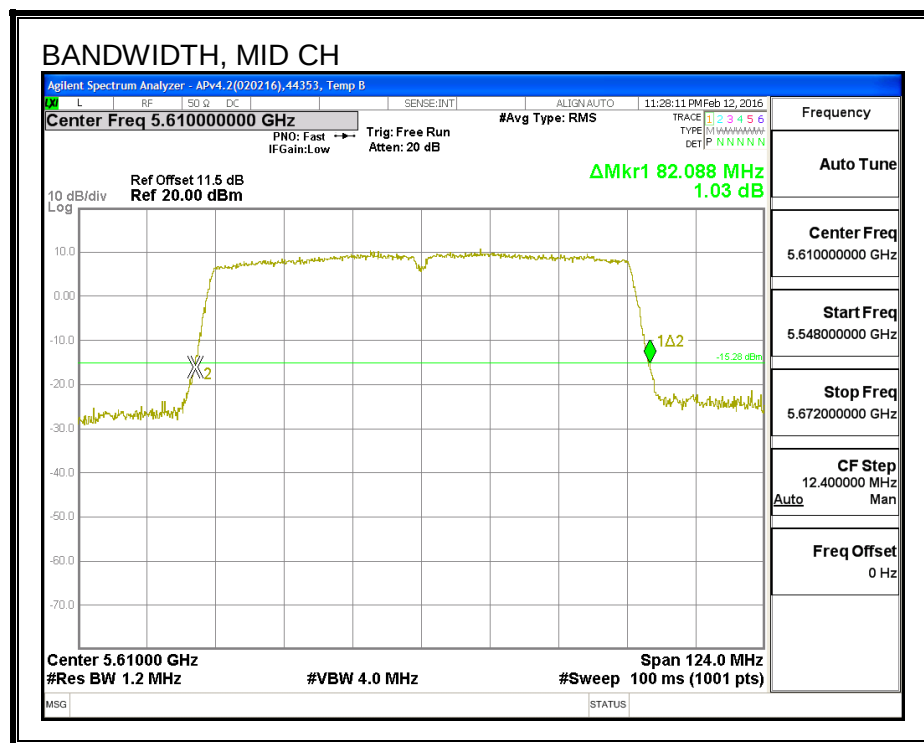
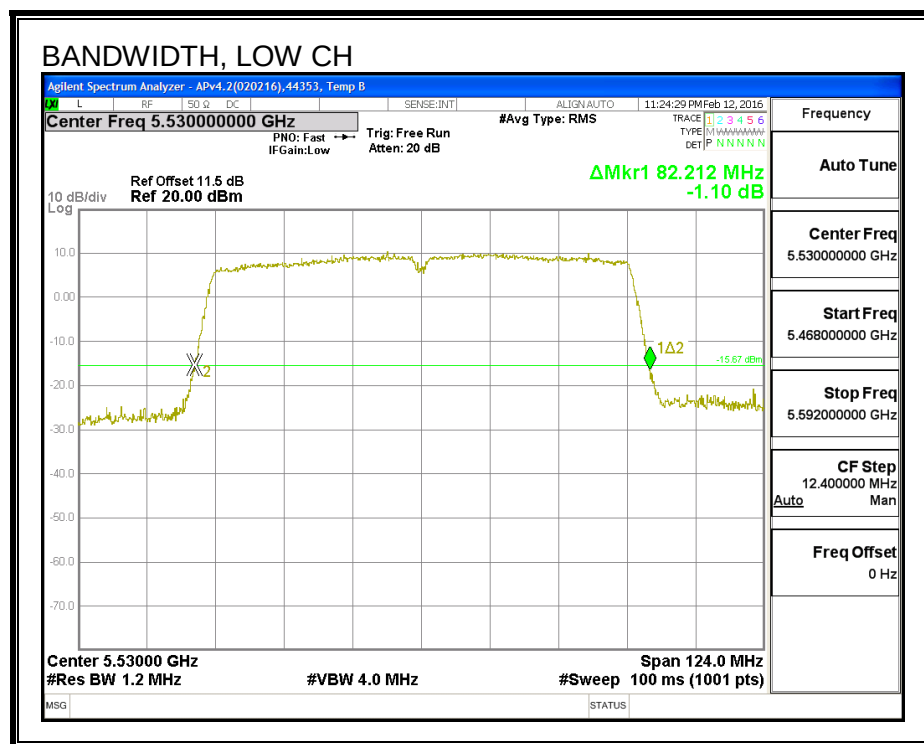
8.54.1. 26 dB BANDWIDTH

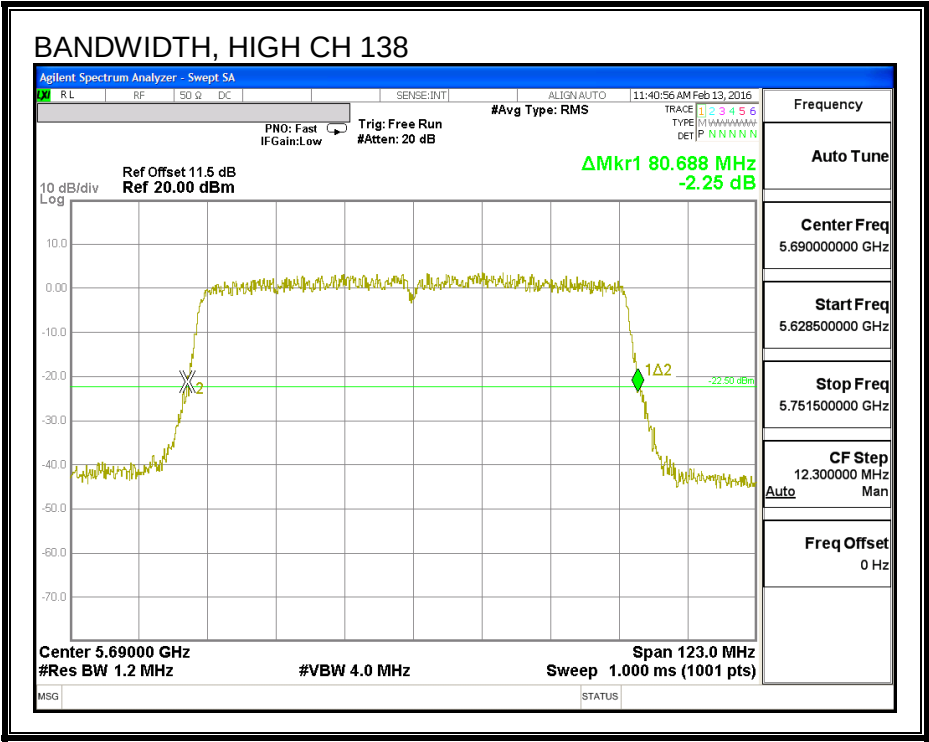
LIMITS

None; for reporting purposes only.

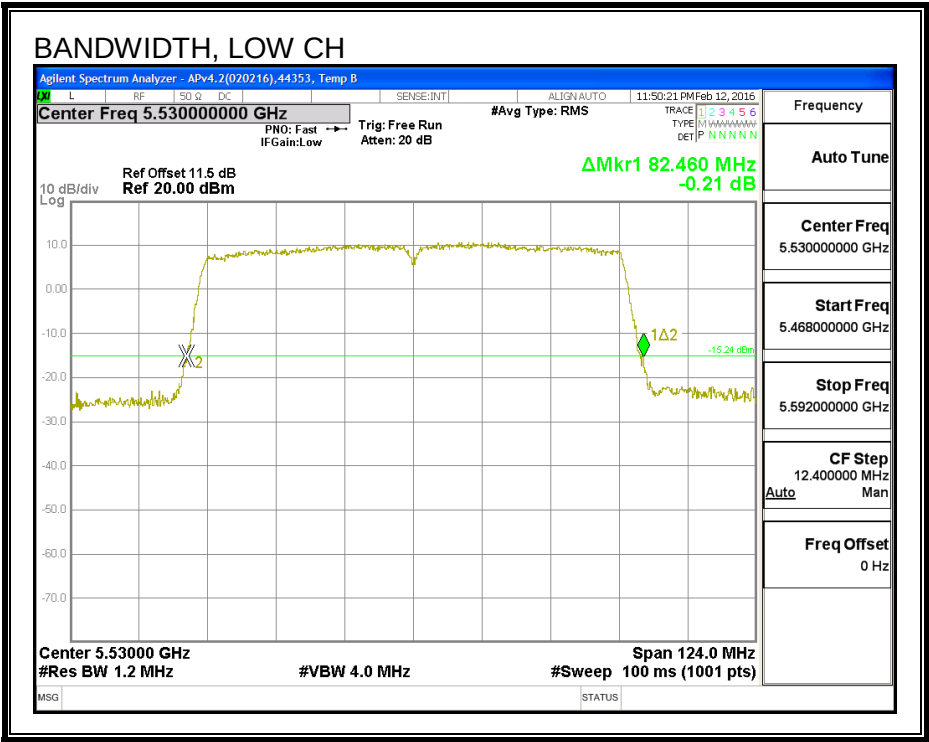
RESULTS

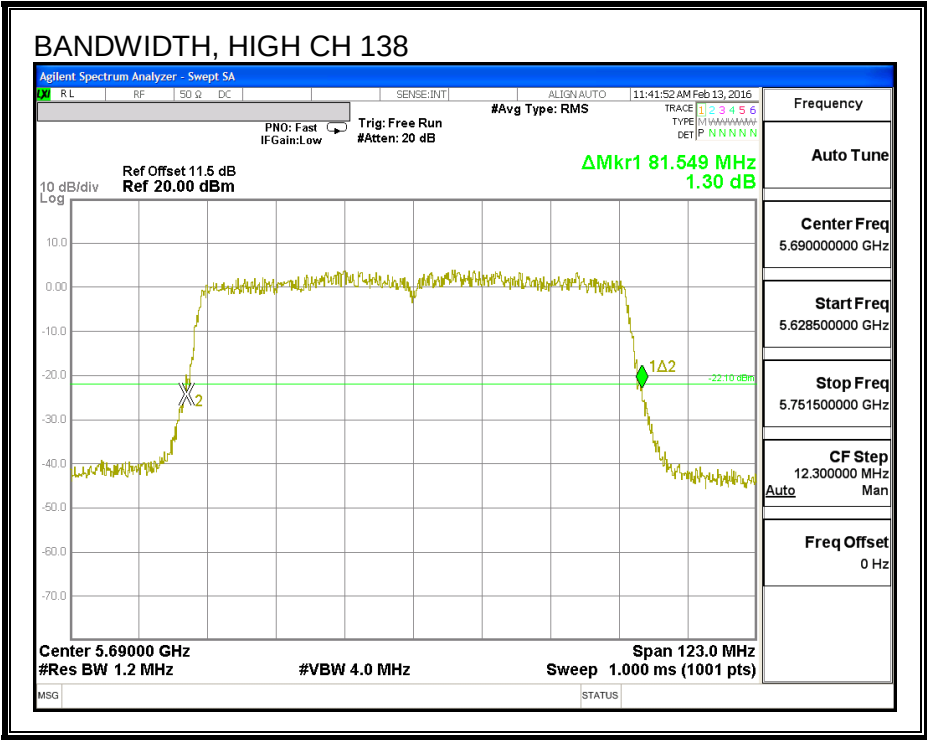
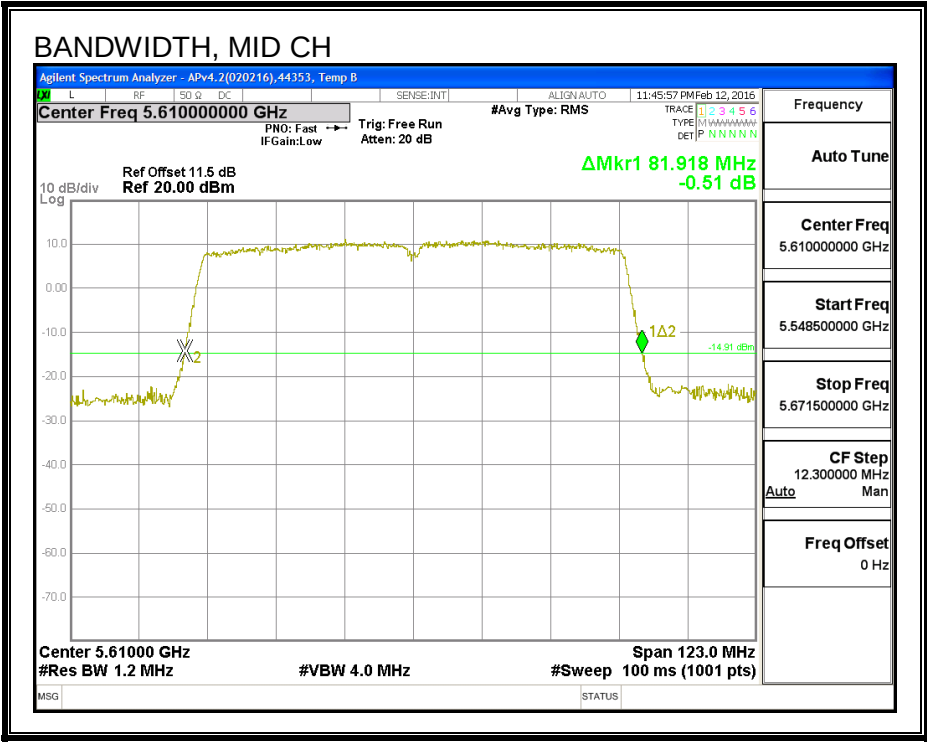
Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)
Low	5530	82.21	82.46
Mid	5610	82.09	81.92
High	5690	80.69	81.55





26 dB BANDWIDTH, CHAIN 1





8.54.2. 99% BANDWIDTH

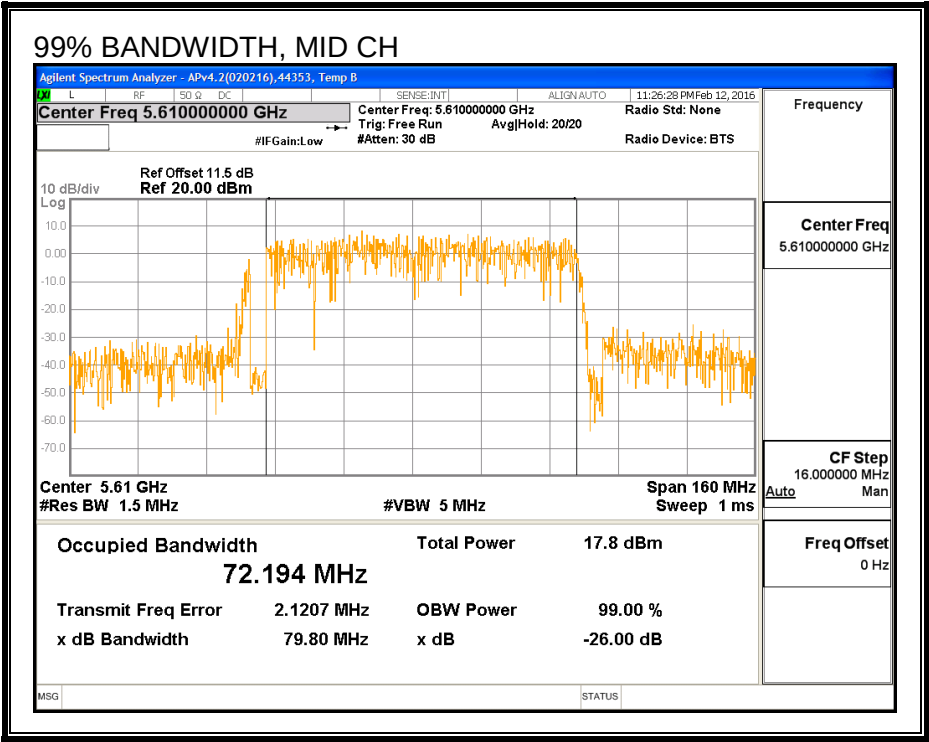
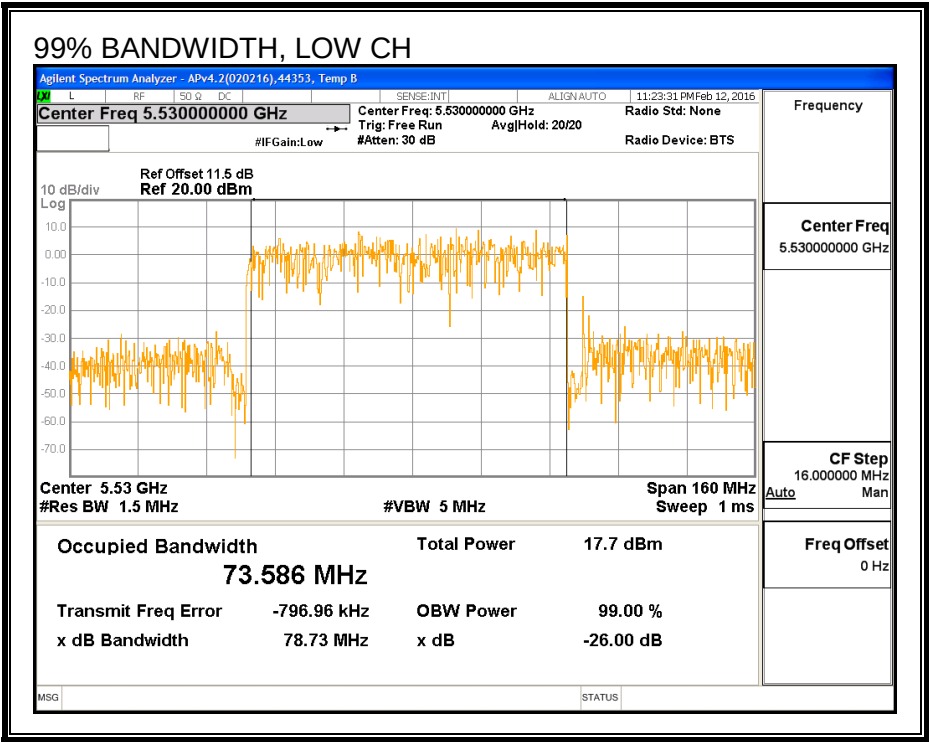
LIMITS

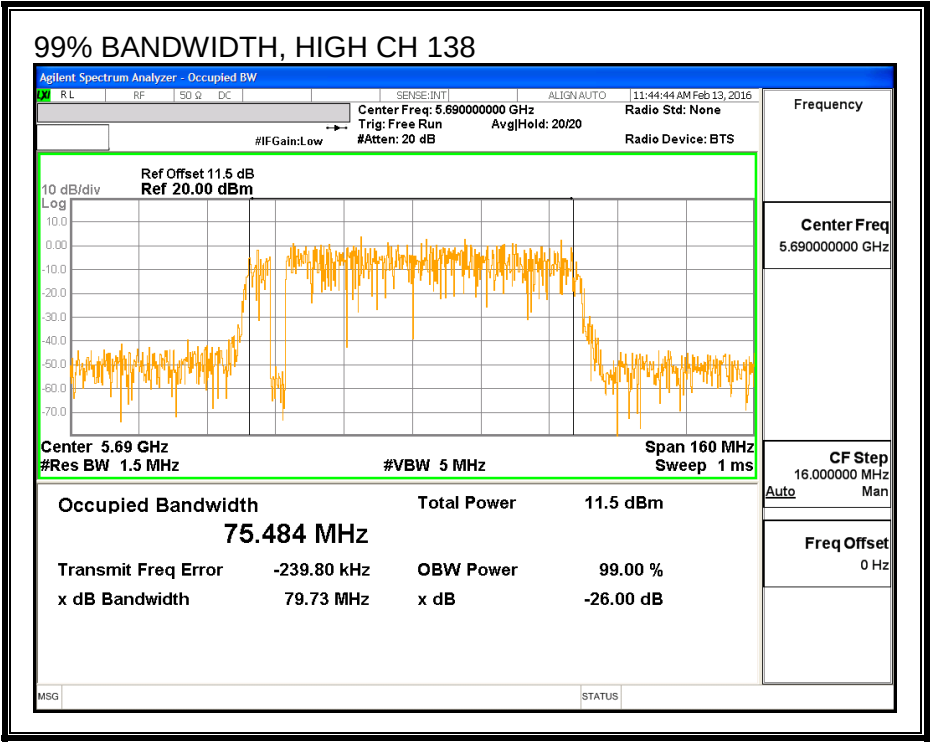
None; for reporting purposes only.

RESULTS

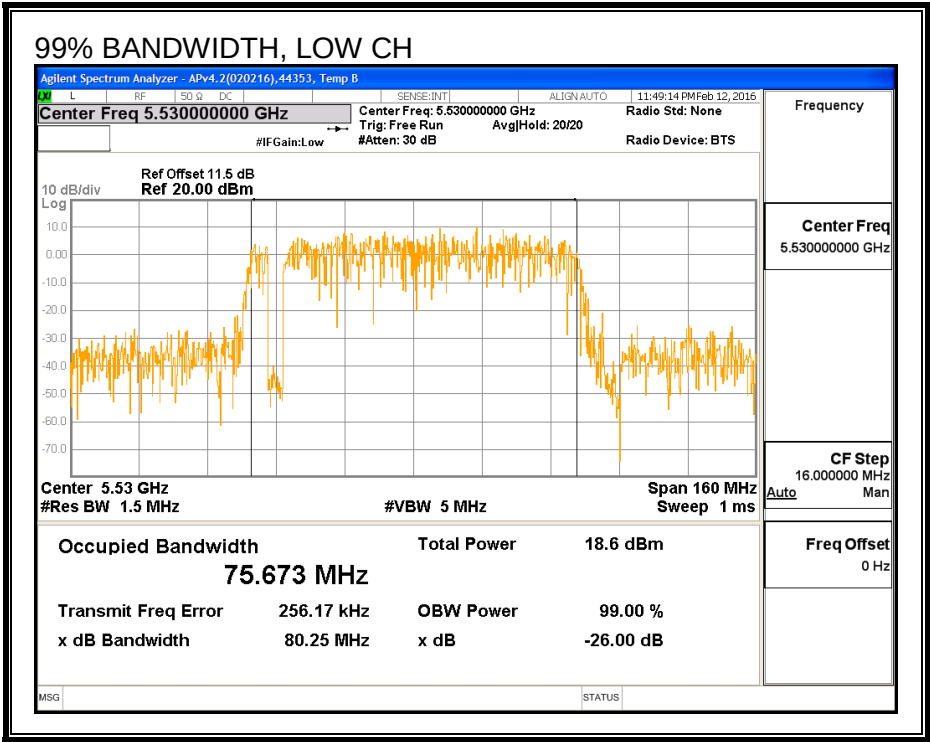
Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low	5530	73.586	75.673
Mid	5610	72.194	75.730
High	5690	75.484	76.277

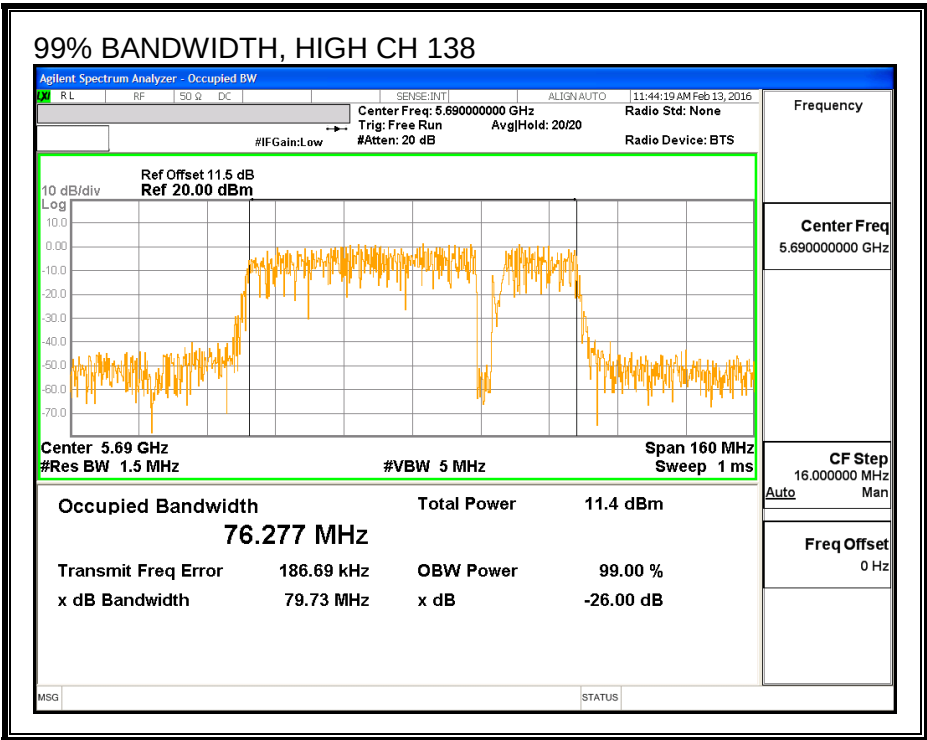
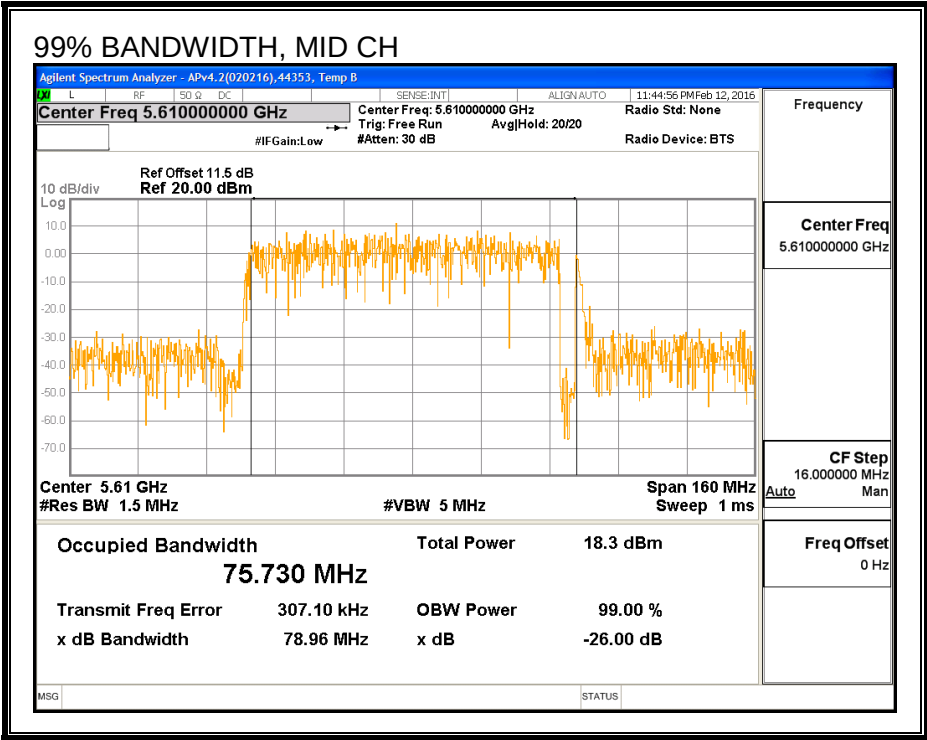
99% BANDWIDTH, CHAIN 0





99% BANDWIDTH, CHAIN 1





8.54.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Channel	Frequency (MHz)	Chain 0 Power (dBm)	Chain 1 Power (dBm)	Total Power (dBm)
Low	5530	9.92	9.98	12.96
Mid	5610	17.92	17.85	20.90
High	5690	17.91	17.94	20.94

8.54.4. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

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

TEST PROCEDURE

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

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

DIRECTIONAL ANTENNA GAIN

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
5.00	4.57	4.79

RESULTS

Bandwidth, Antenna Gain and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5530	82.46	75.673	4.79	4.79	24.00	11.00
High	5610	82.09	75.730	4.79	4.79	24.00	11.00

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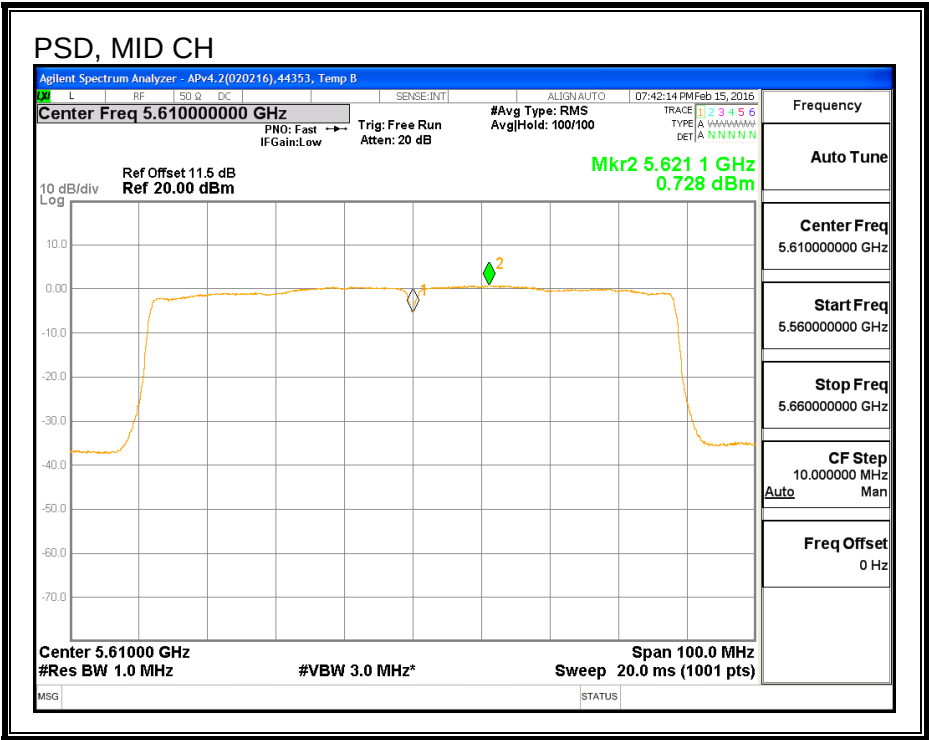
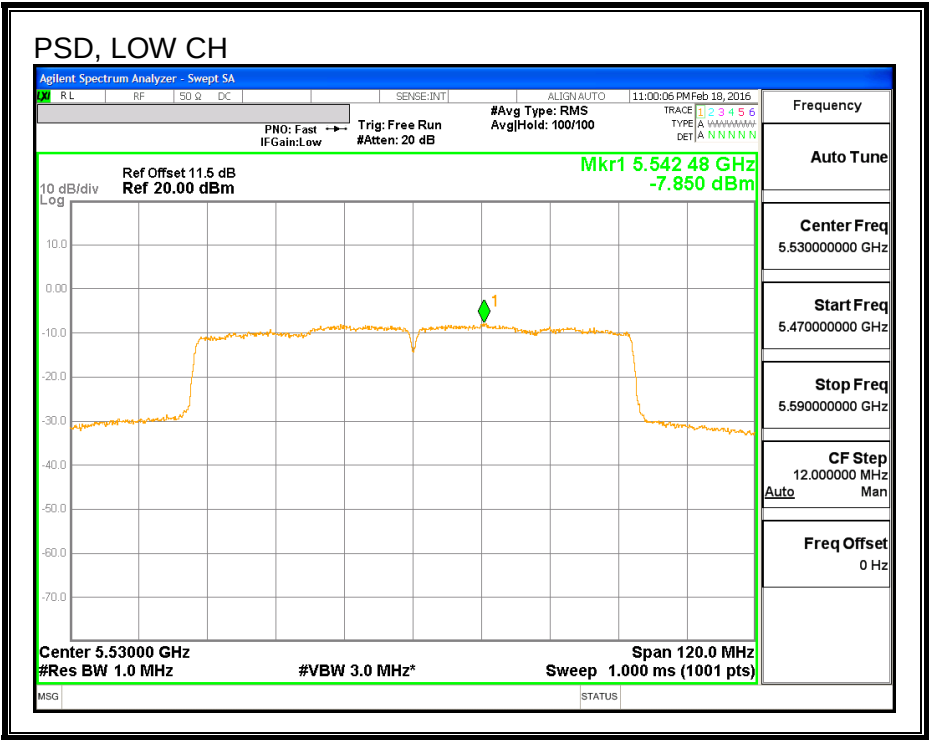
Output Power Results

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	5530	9.92	9.98	12.96	24.00	-11.04
High	5610	17.92	17.85	20.90	24.00	-3.10

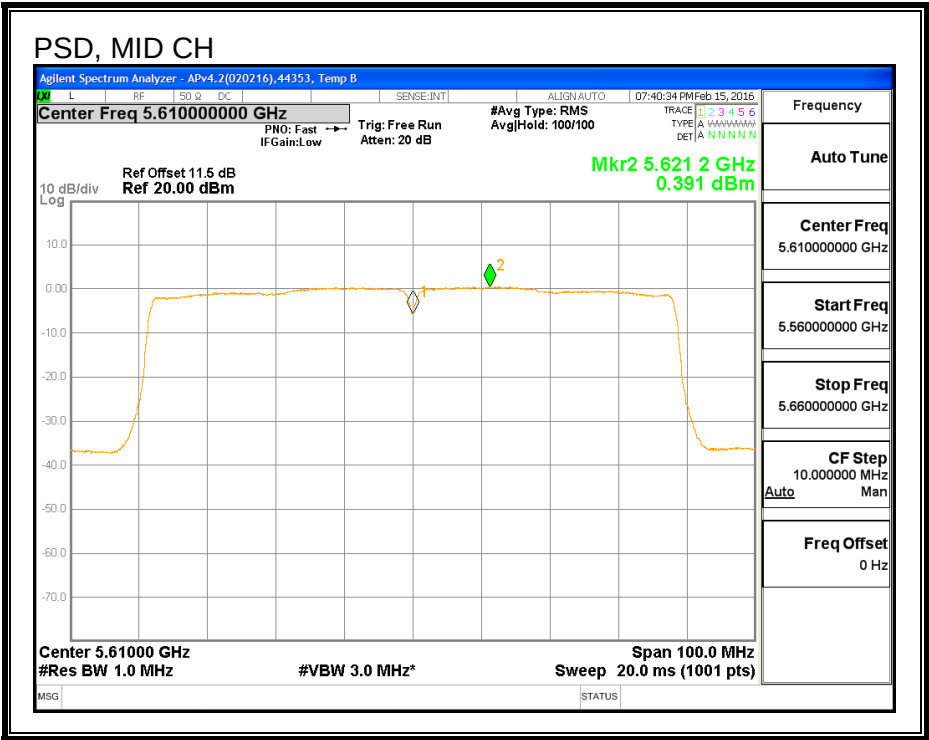
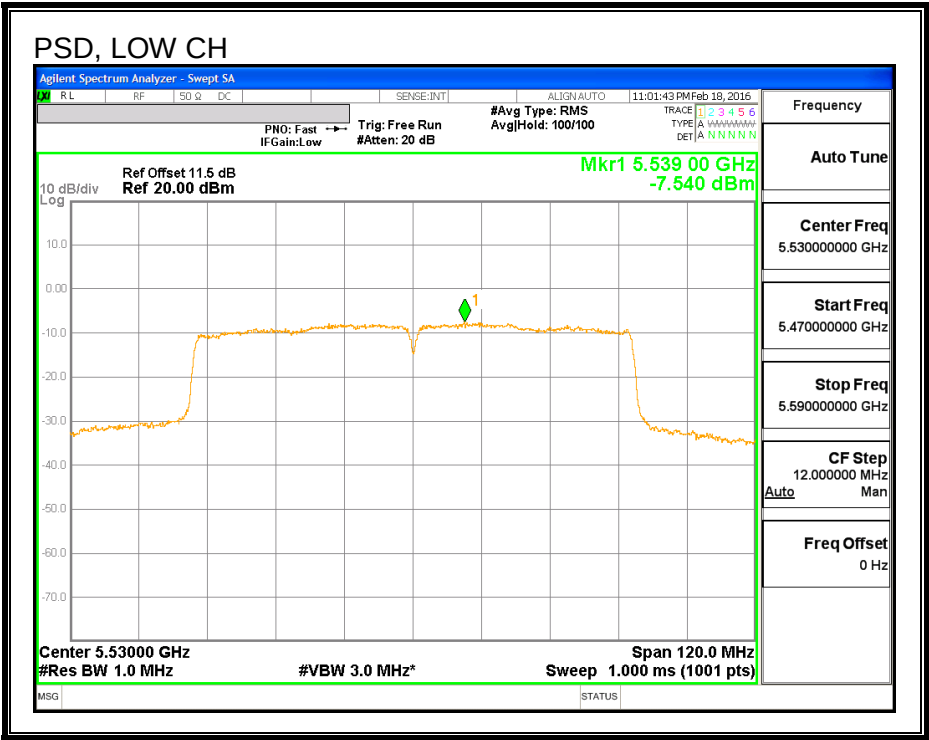
PSD Results

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	5530	-7.85	-7.54	-4.46	11.00	-15.46
High	5610	0.73	0.39	3.79	11.00	-7.21

PSD, CHAIN 0



PSD, CHAIN 1



8.54.5. STRADDLE CHANNEL 138 RESULTS (FCC)

UNII-2C BAND

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
138	5690	75.78	4.79	4.79	24.00	11.00

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

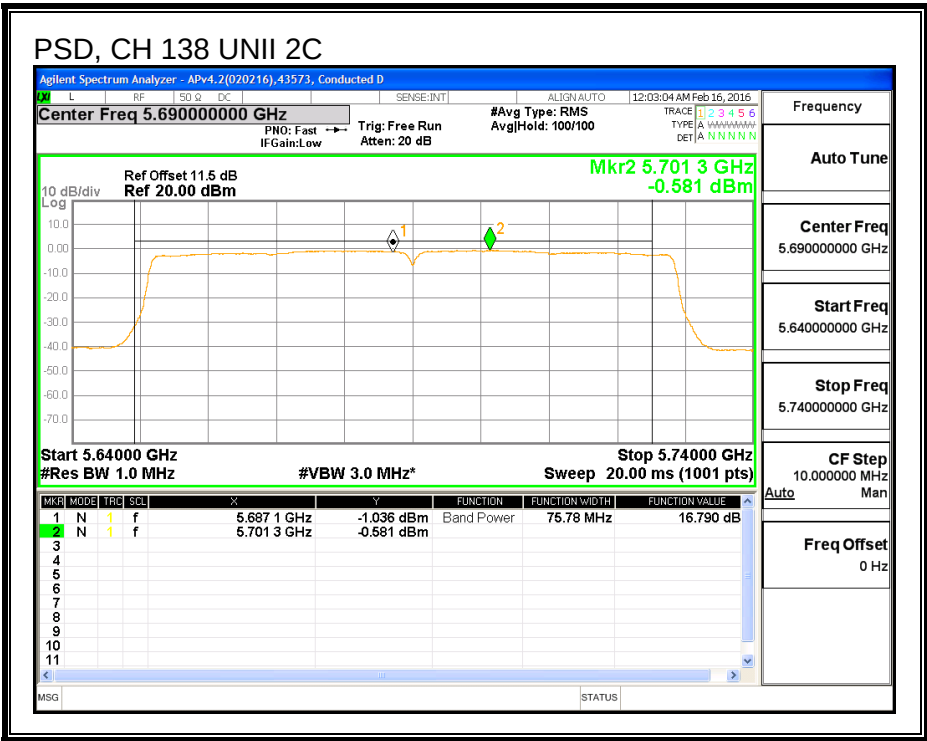
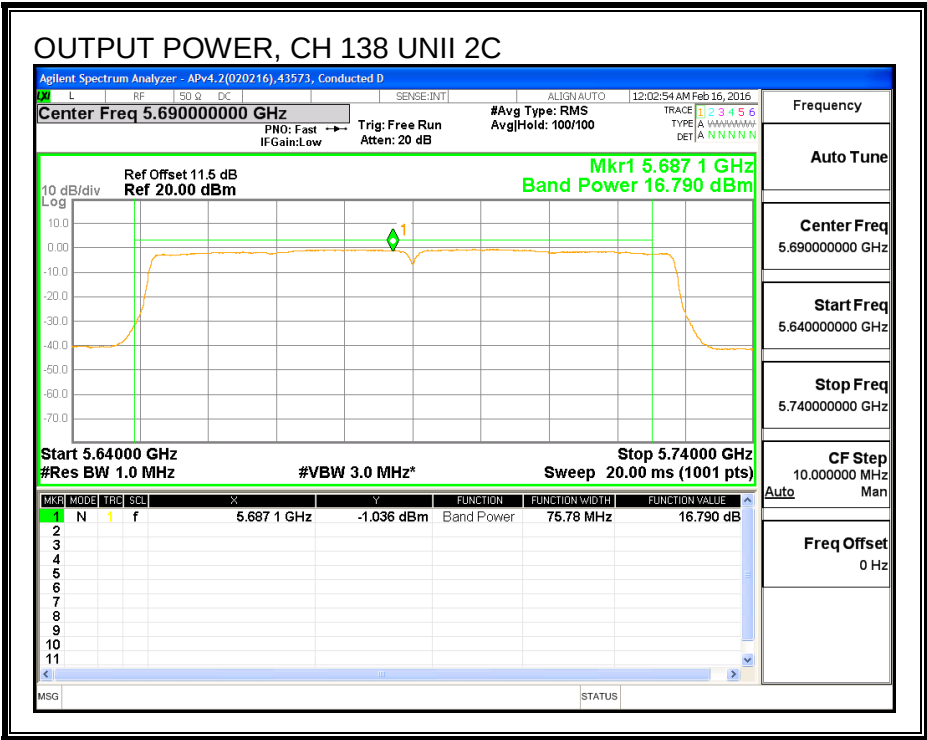
Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	16.79	17.04	20.15	24.00	-3.85

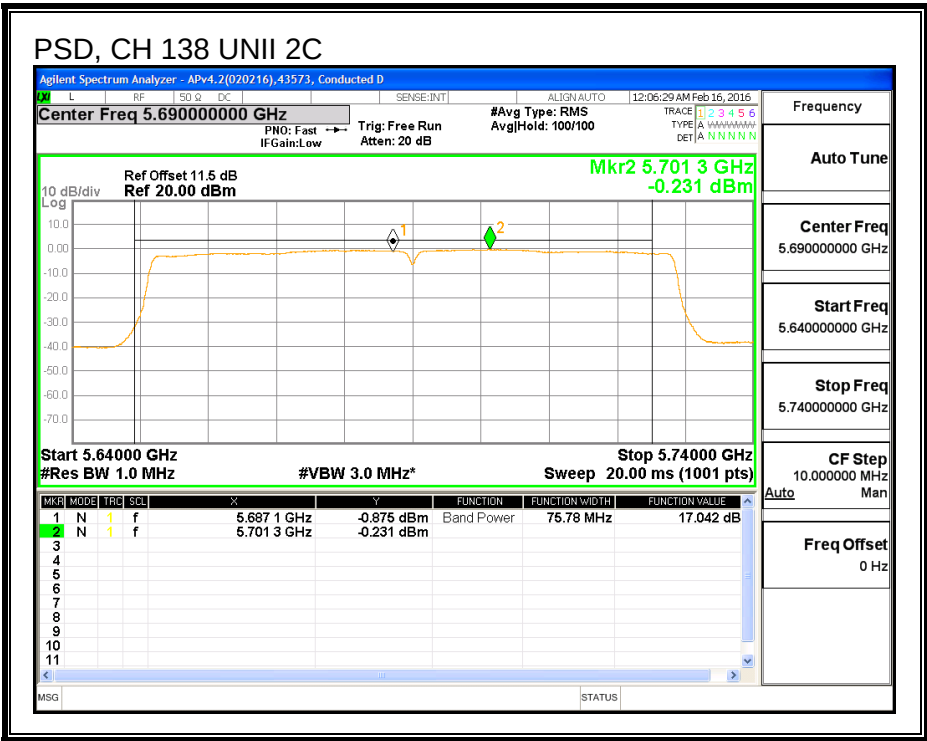
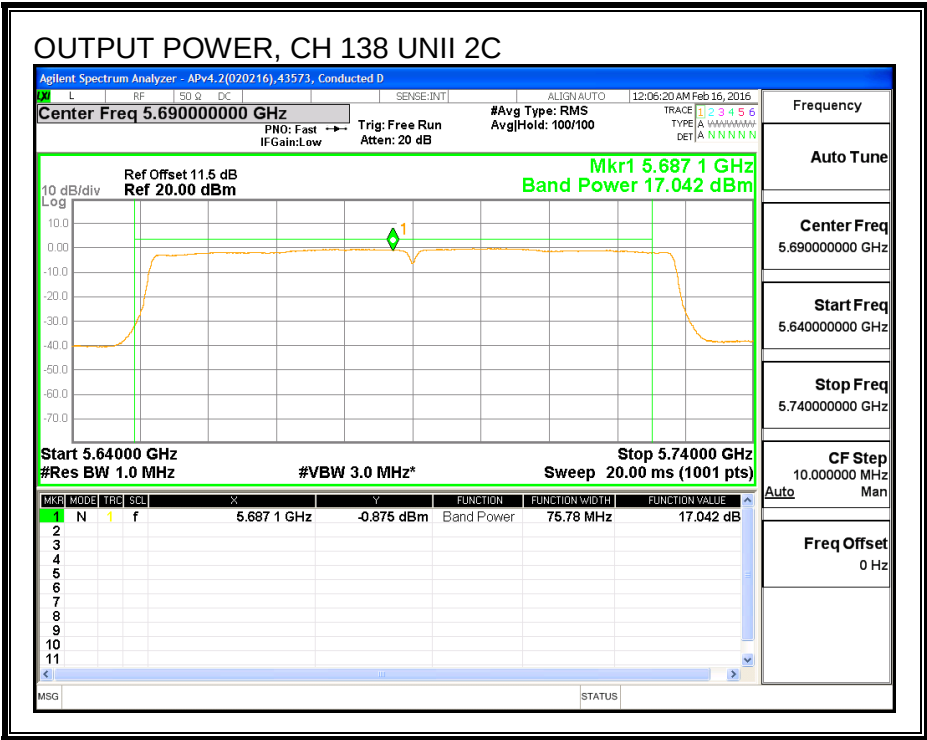
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	-0.58	-0.23	2.83	11.00	-8.17

CHAIN 0



CHAIN 1



UNII-3 BAND

Antenna Gain and Limit

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
138	5690	5.34	4.79	4.79	30.00	30.00

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

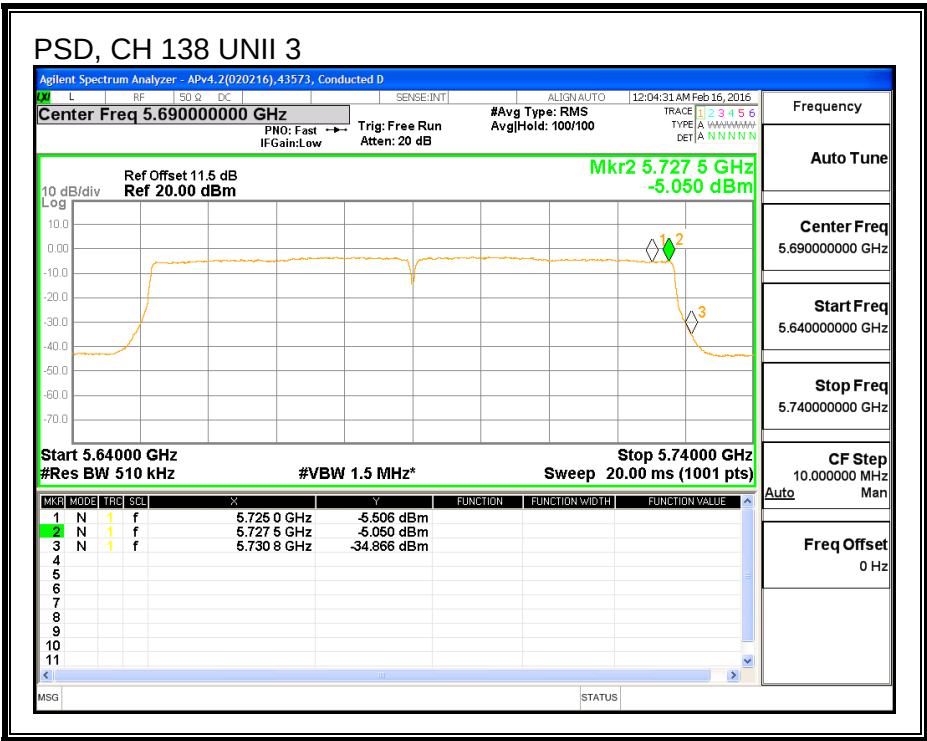
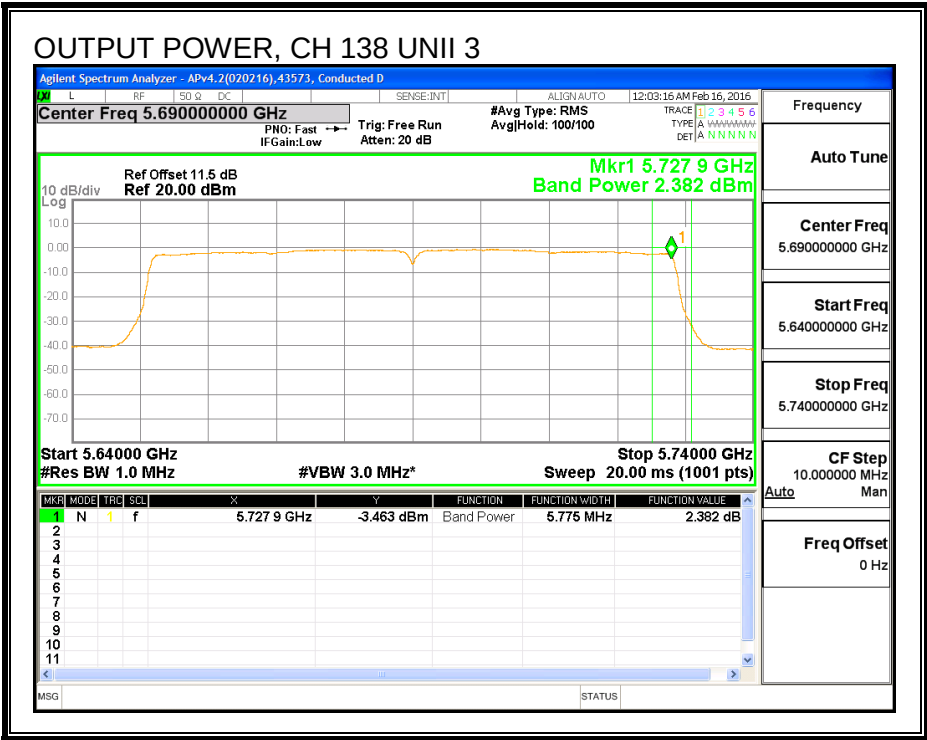
Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	2.38	2.87	5.86	30.00	-24.14

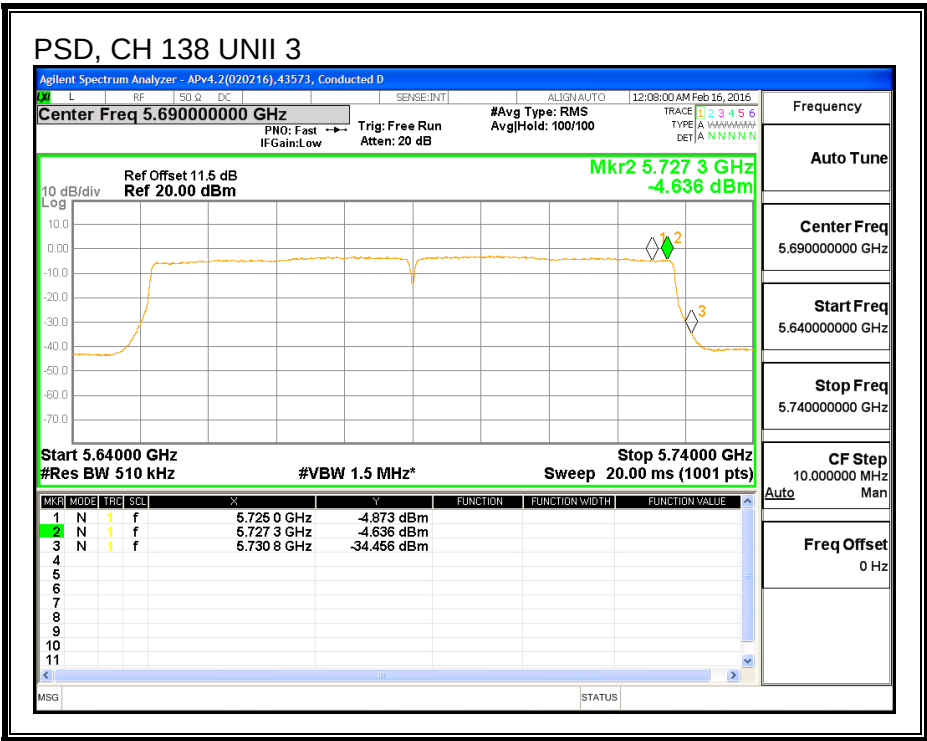
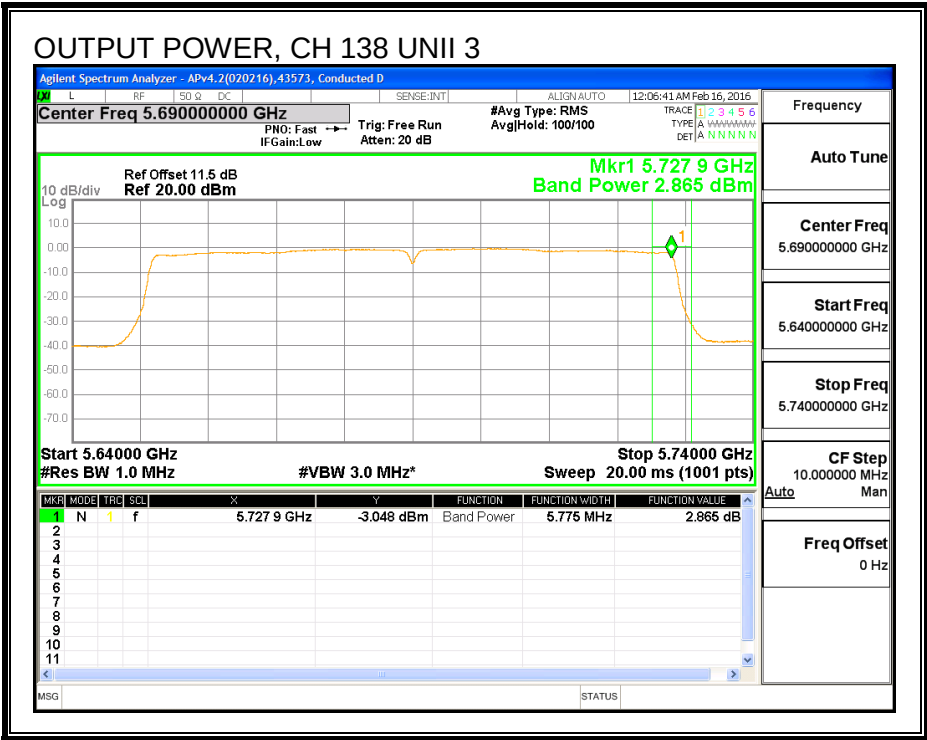
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	-5.05	-4.64	-1.61	30.00	-31.61

CHAIN 0



CHAIN 1



8.54.6. 6 dB BANDWIDTH

LIMITS

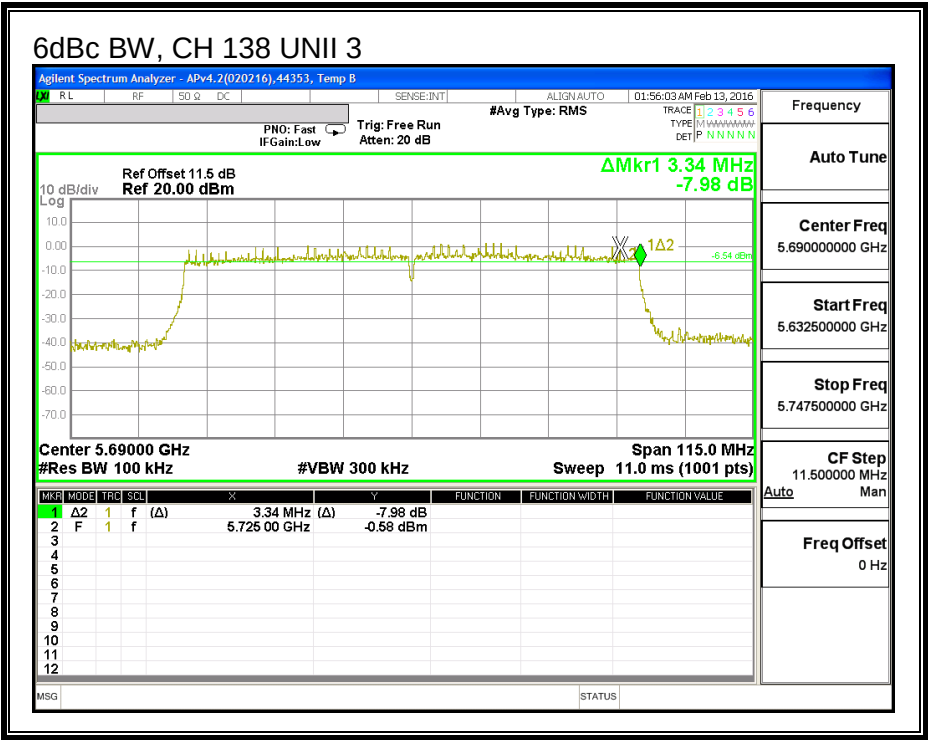
FCC §15.407 (e)

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

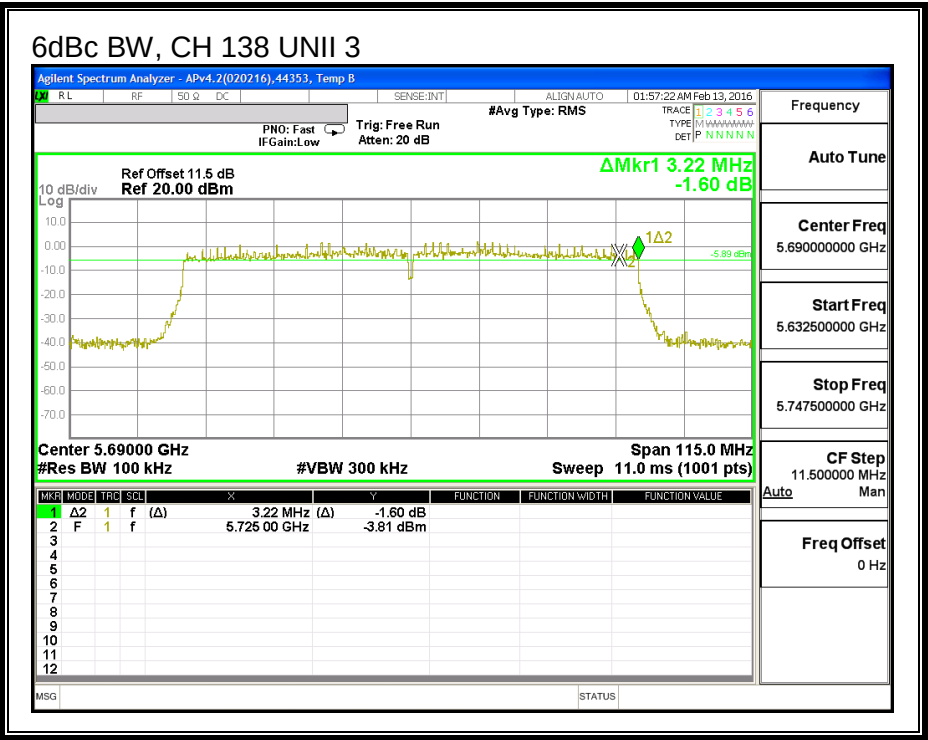
RESULTS

Channel	Frequency (MHz)	6 dB BW Chain 0 (MHz)	6 dB BW Chain 1 (MHz)
High	5690	3.34	3.22

CHAIN 0



CHAIN 1



8.55. 802.11ac VHT80 2Tx BEAM FORMING MODE IN THE 5.6 GHz BAND

8.55.1. 26 dB BANDWIDTH

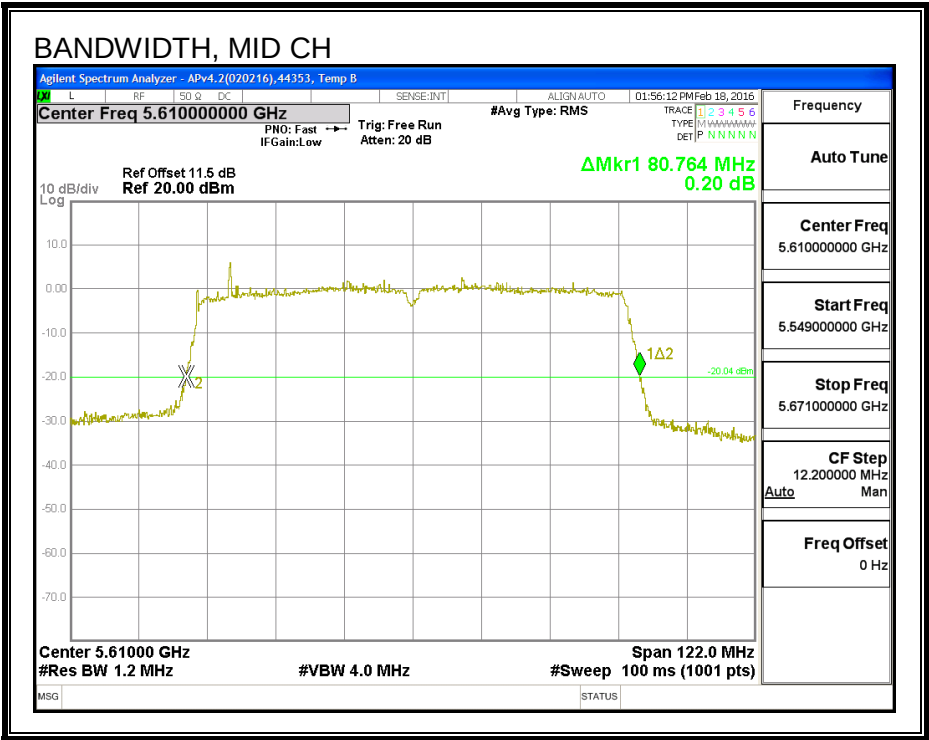
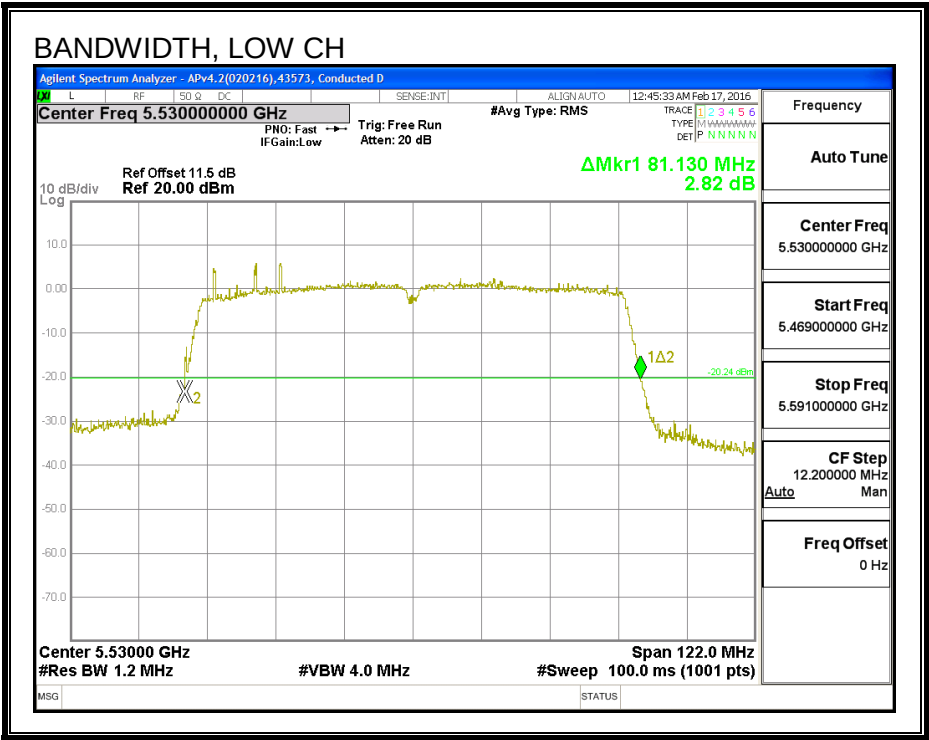
LIMITS

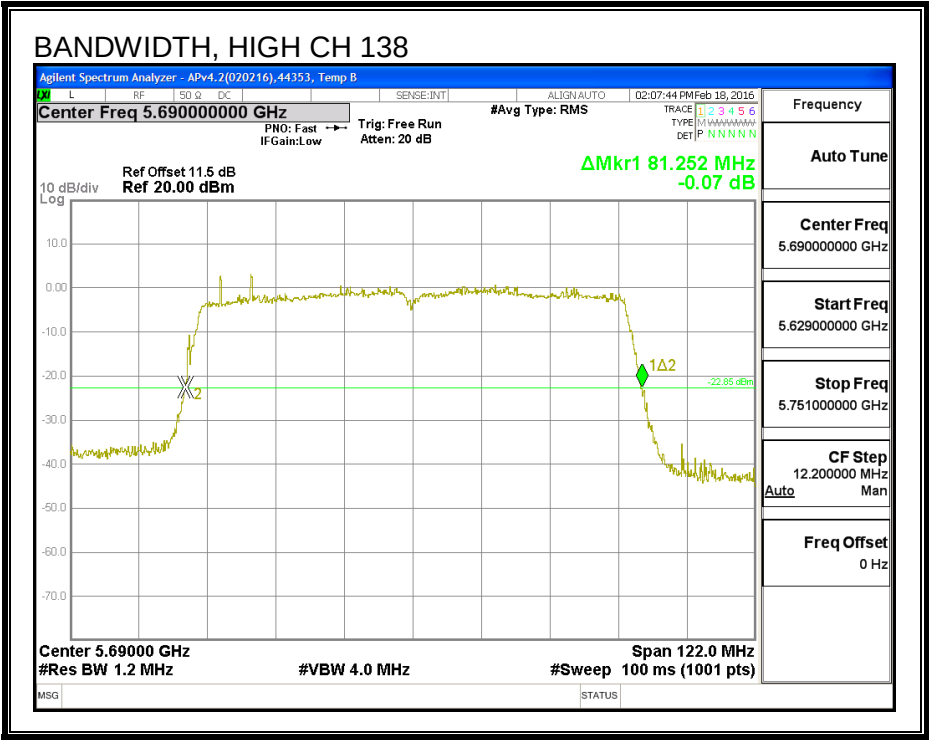
None; for reporting purposes only.

RESULTS

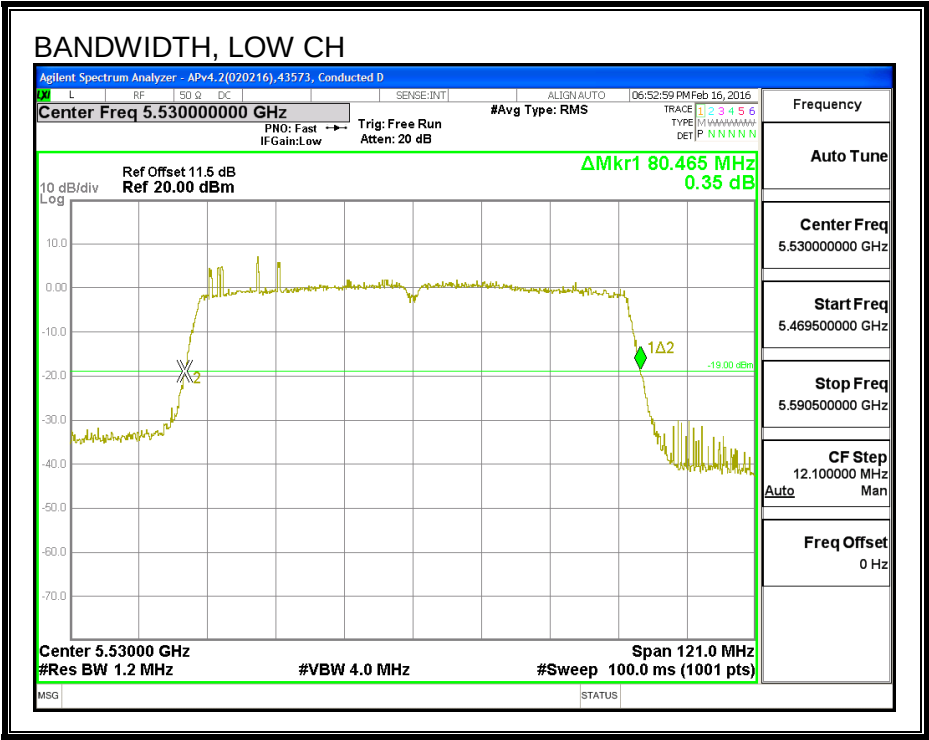
Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)
Low	5530	81.13	80.47
Mid	5610	80.76	81.13
High	5690	81.25	80.76

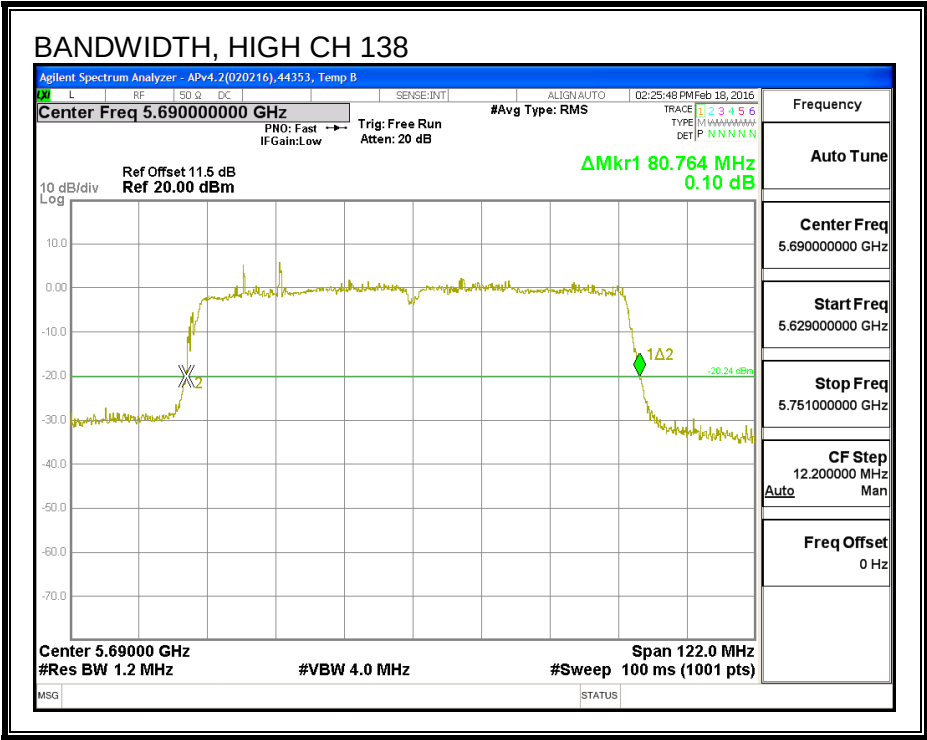
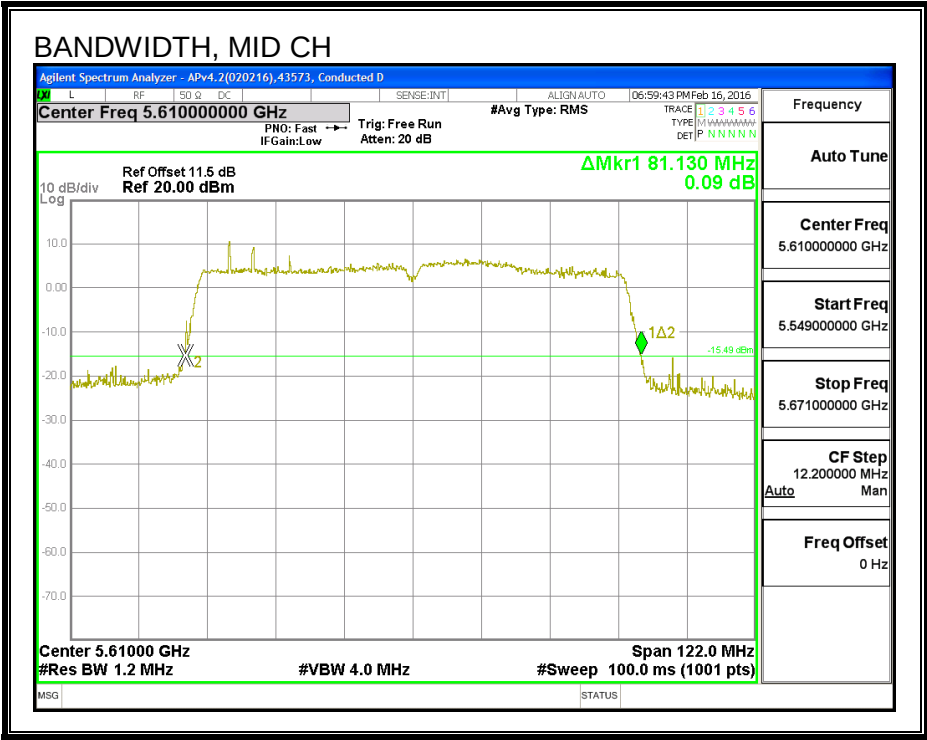
26 dB BANDWIDTH, CHAIN 0





26 dB BANDWIDTH, CHAIN 1





8.55.2. 99% BANDWIDTH

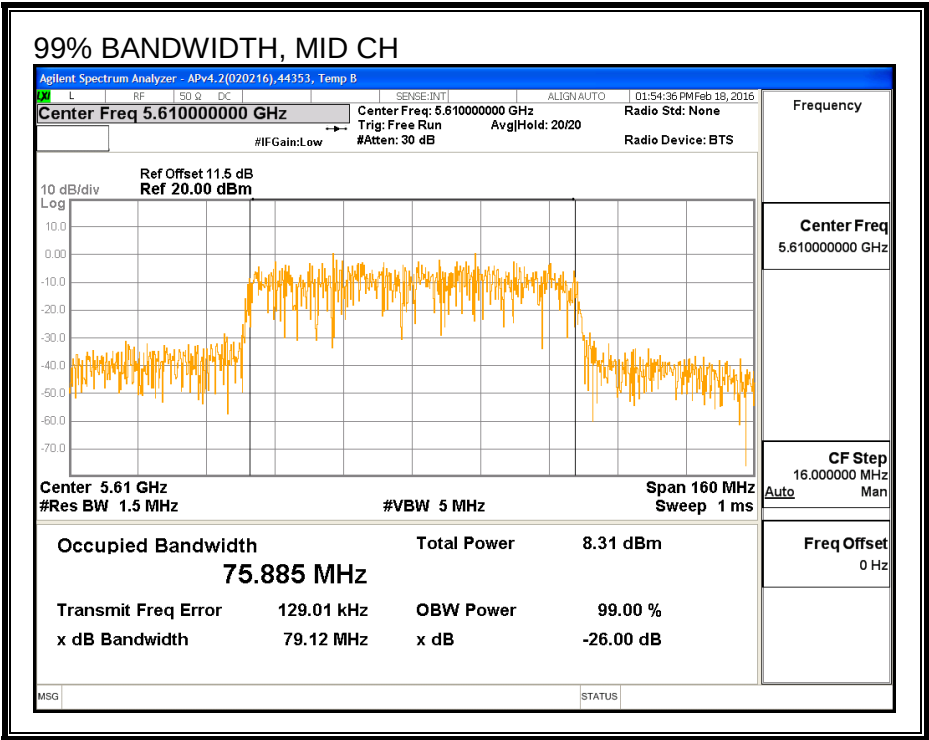
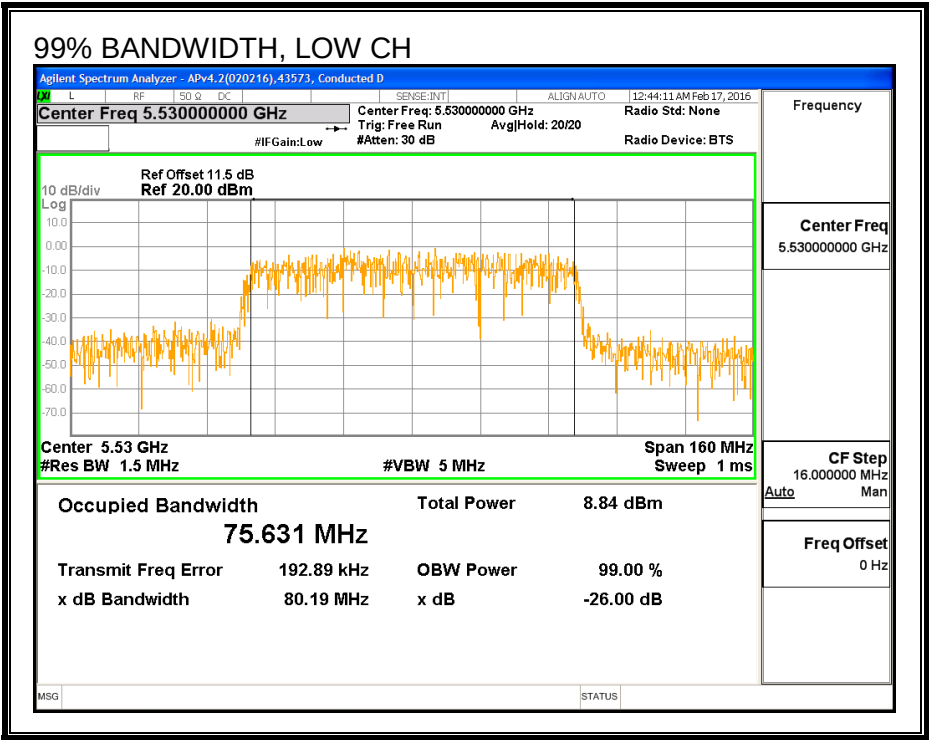
LIMITS

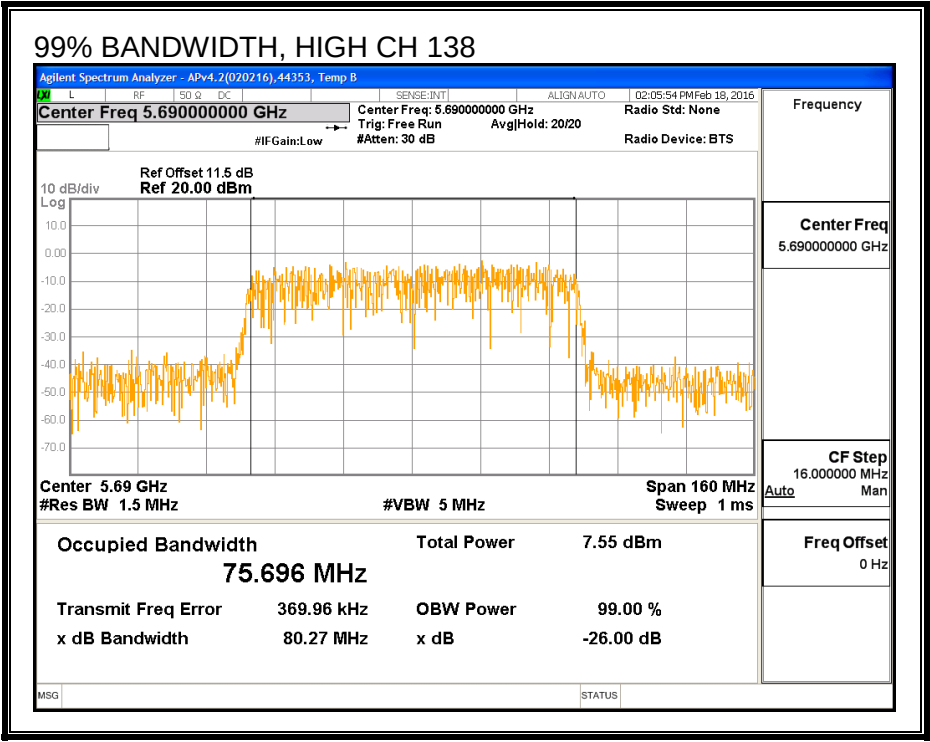
None; for reporting purposes only.

RESULTS

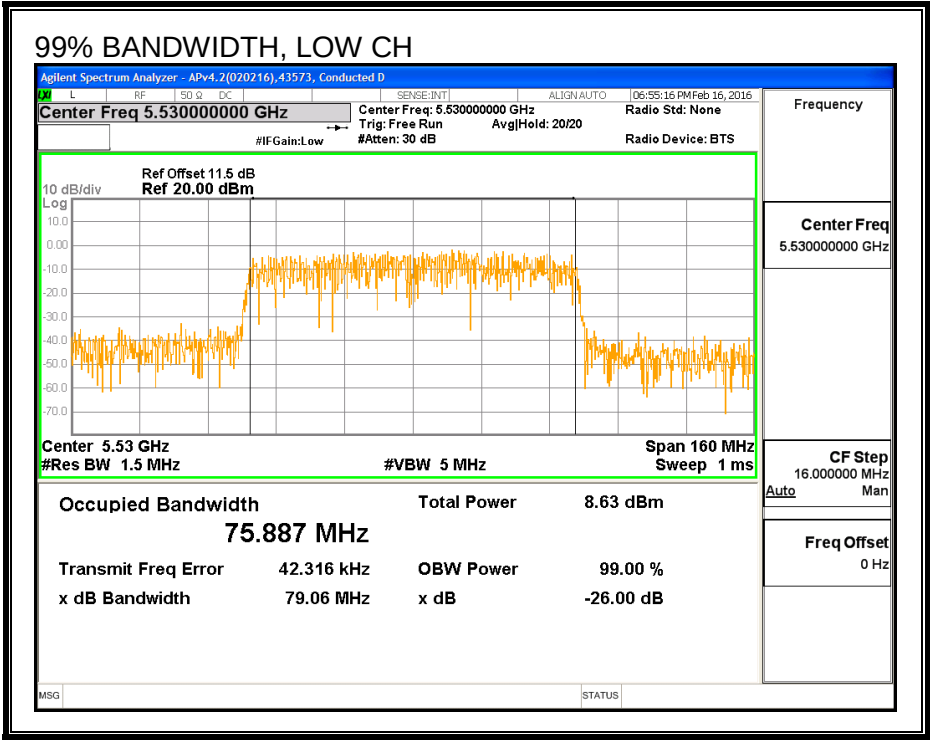
Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low	5530	75.631	75.887
Mid	5610	75.885	76.259
High	5690	75.696	76.159

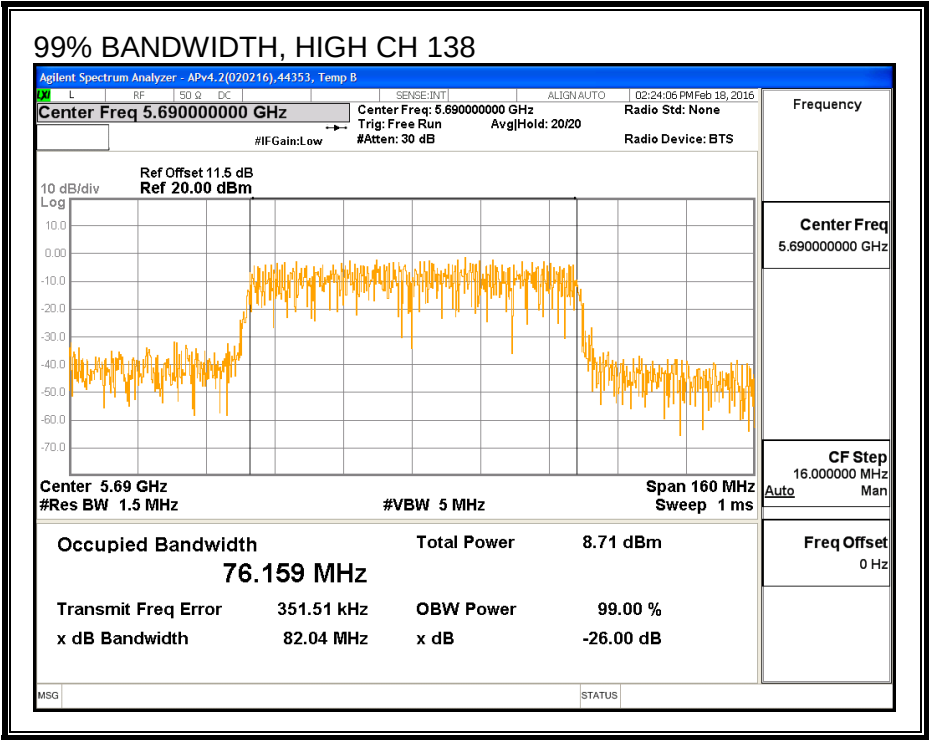
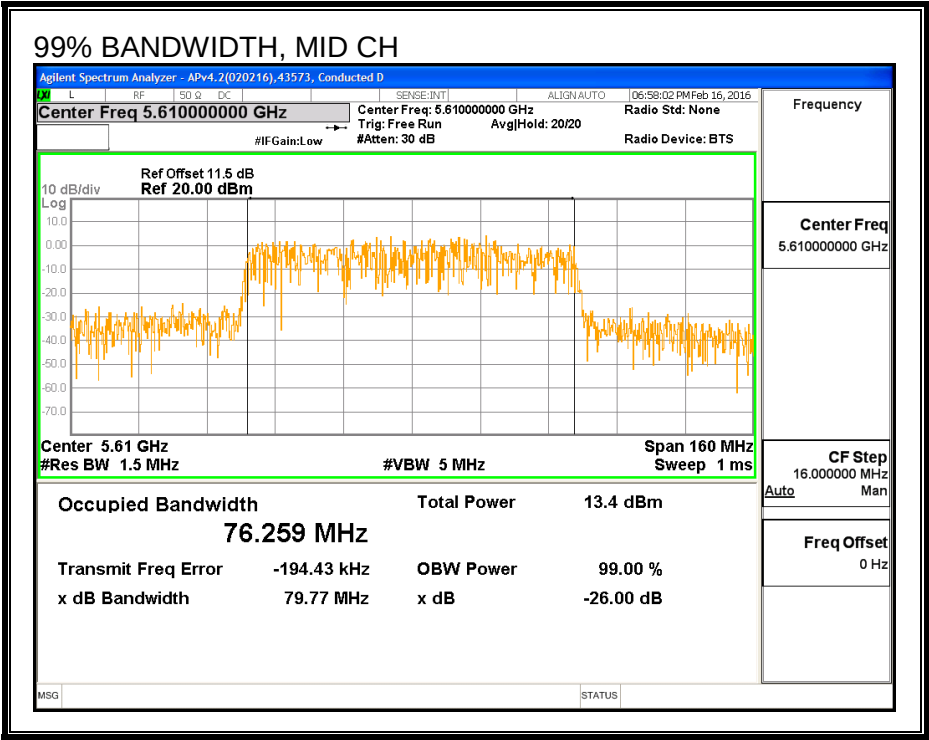
99% BANDWIDTH, CHAIN 0





99% BANDWIDTH, CHAIN 1





8.55.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Channel	Frequency (MHz)	Chain 0 Power (dBm)	Chain 1 Power (dBm)	Total Power (dBm)
Low	5530	8.45	8.48	11.48
Mid	5610	16.91	16.88	19.91
High	5690	16.88	16.50	19.70

8.55.4. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

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

TEST PROCEDURE

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

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

DIRECTIONAL ANTENNA GAIN

The TX chains are 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)
5.00	4.57	7.80

RESULTS

Bandwidth, Antenna Gain and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5530	80.47	75.631	7.80	7.80	24.00	9.20
High	5610	80.76	75.885	7.80	7.80	24.00	9.20

Duty Cycle CF (dB)	0.10	Included in Calculations of Corr'd PSD
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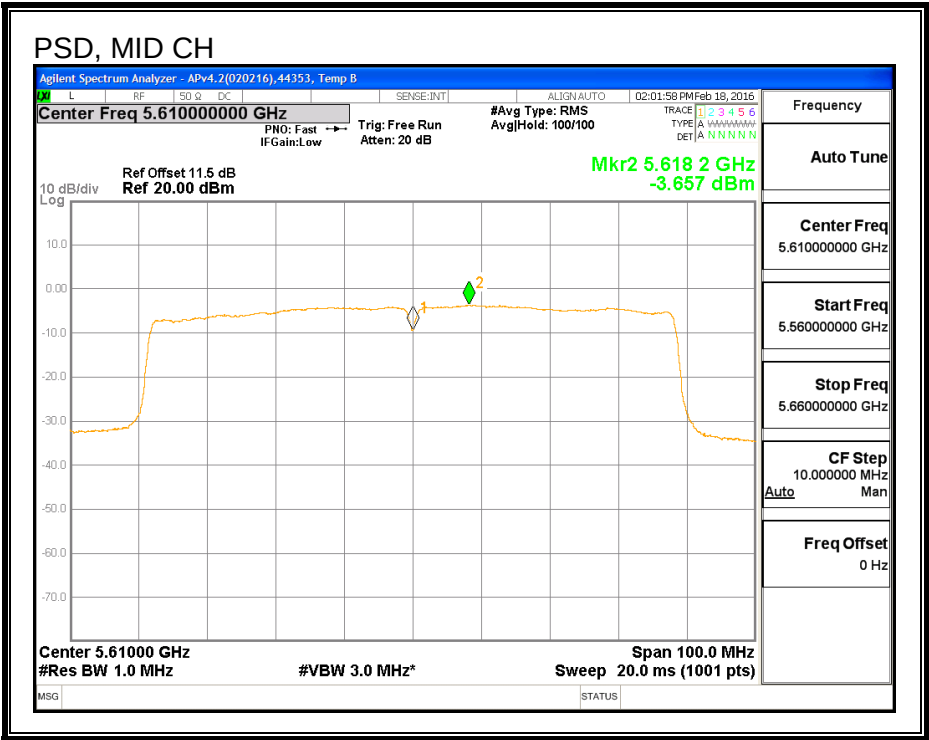
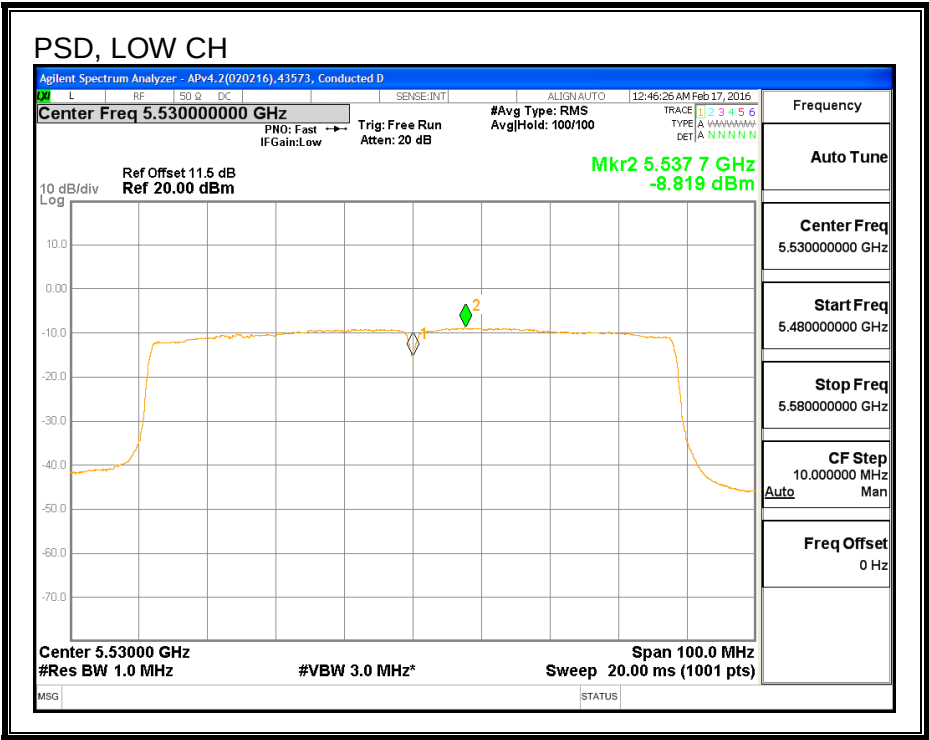
Output Power Results

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	5530	8.45	8.48	11.48	24.00	-12.52
High	5610	16.91	16.88	19.91	24.00	-4.09

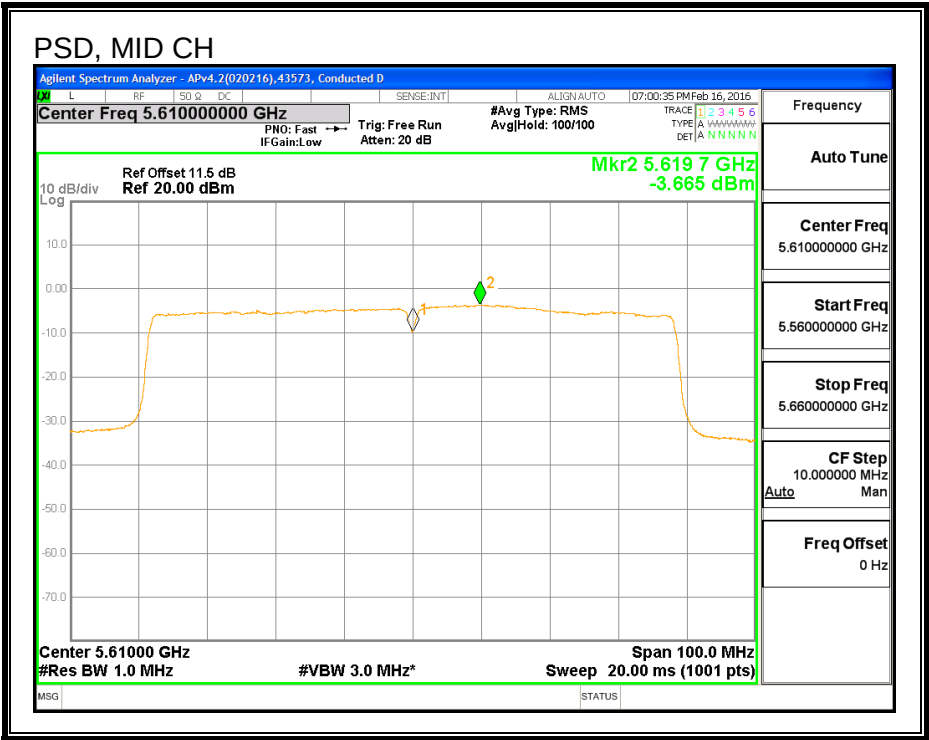
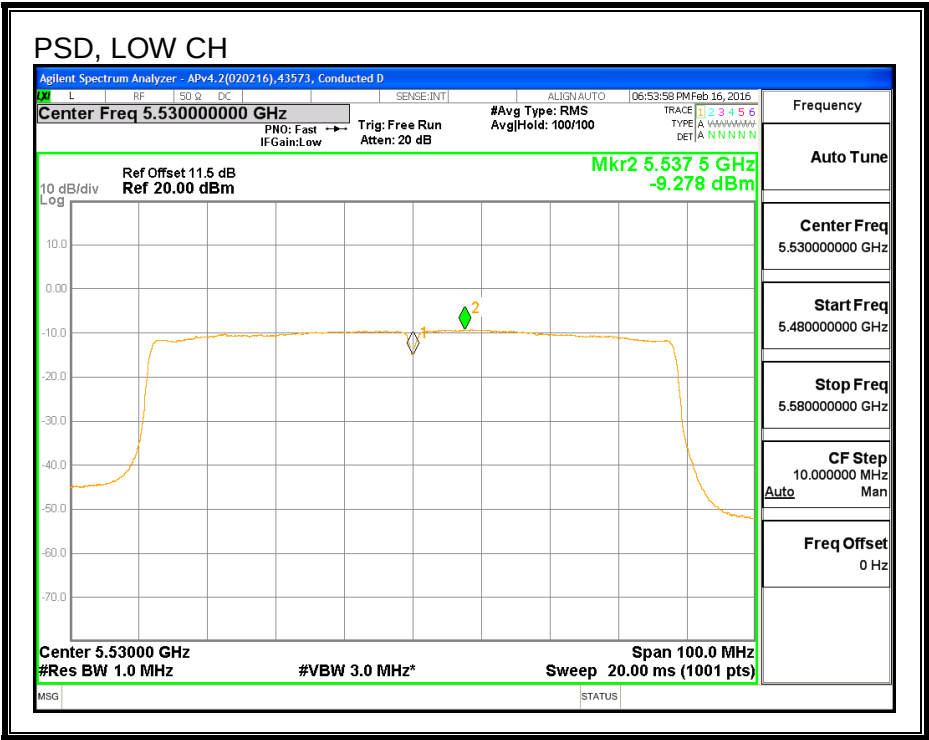
PSD Results

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	5530	-8.82	-9.28	-5.93	9.20	-15.13
High	5610	-3.66	-3.67	-0.55	9.20	-9.75

PSD, CHAIN 0



PSD, CHAIN 1



8.55.5. TPC POWER

LIMITS

FCC: §15.407 (h) (1)

Transmit power control (TPC). U-NII devices operating in the 5.25–5.35 GHz band and the 5.47–5.725 GHz band shall employ a TPC mechanism. The U-NII device is required to have the capability to operate at least 6 dB below the mean EIRP value of 30 dBm. A TPC mechanism is not required for systems with an e.i.r.p. of less than 500 mW.

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)
5.00	4.57	7.80

RESULTS

TPC Limits

Channel	Frequency (MHz)	Limit EIRP (dBm)	Directional Gain (dBi)	Limit Cond (dBm)
Mid	5610	24	7.80	16.20

Duty Cycle CF (dB)	0.10	Included in Calculations of Corr'd Power
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TPC Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Cond Power Limit (dBm)	Margin (dB)
Mid	5610	10.87	10.84	13.97	16.20	-2.23

8.55.7. STRADDLE CHANNEL 138 RESULTS (FCC)

UNII-2C BAND

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
138	5690	75.38	7.80	7.80	22.20	9.20

Duty Cycle CF (dB)	0.10	Included in Calculations of Corr'd Power & PSD
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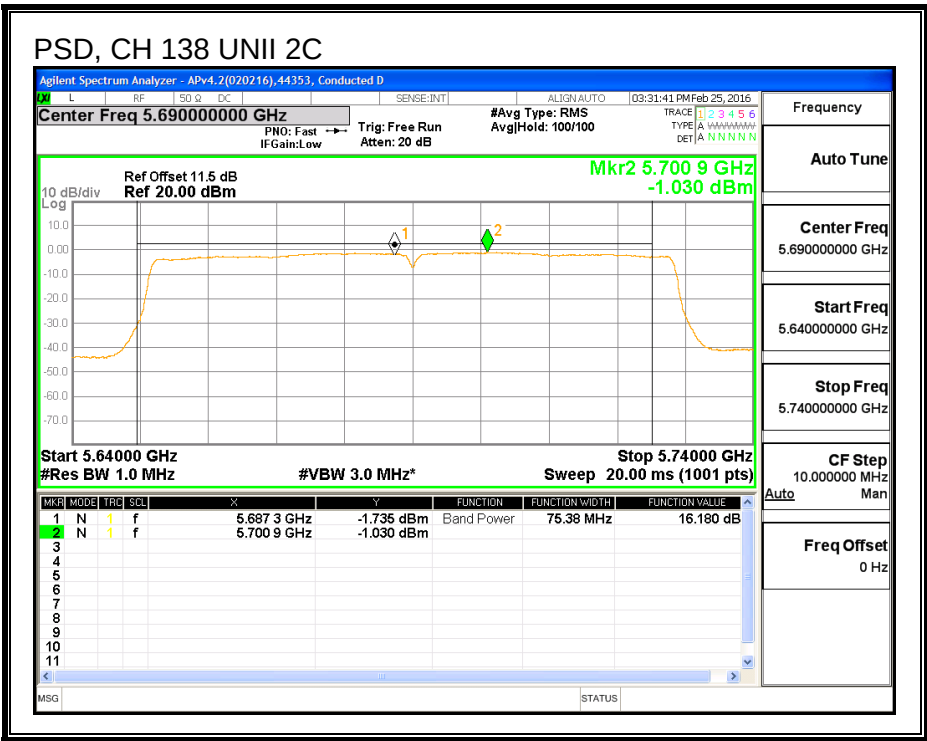
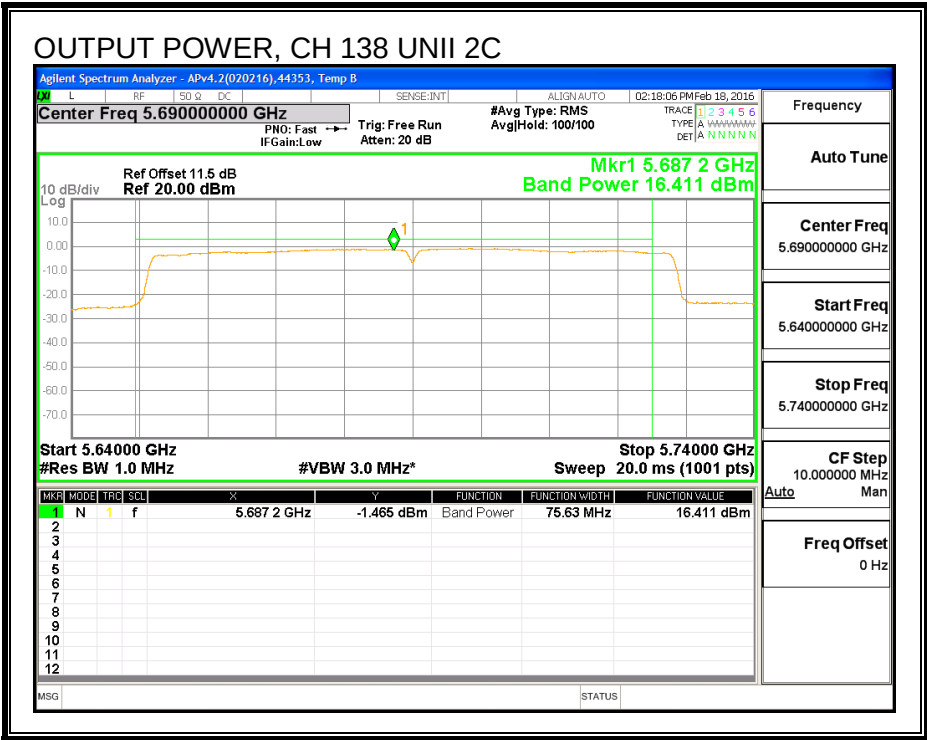
Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	16.41	16.18	19.41	22.20	-2.79

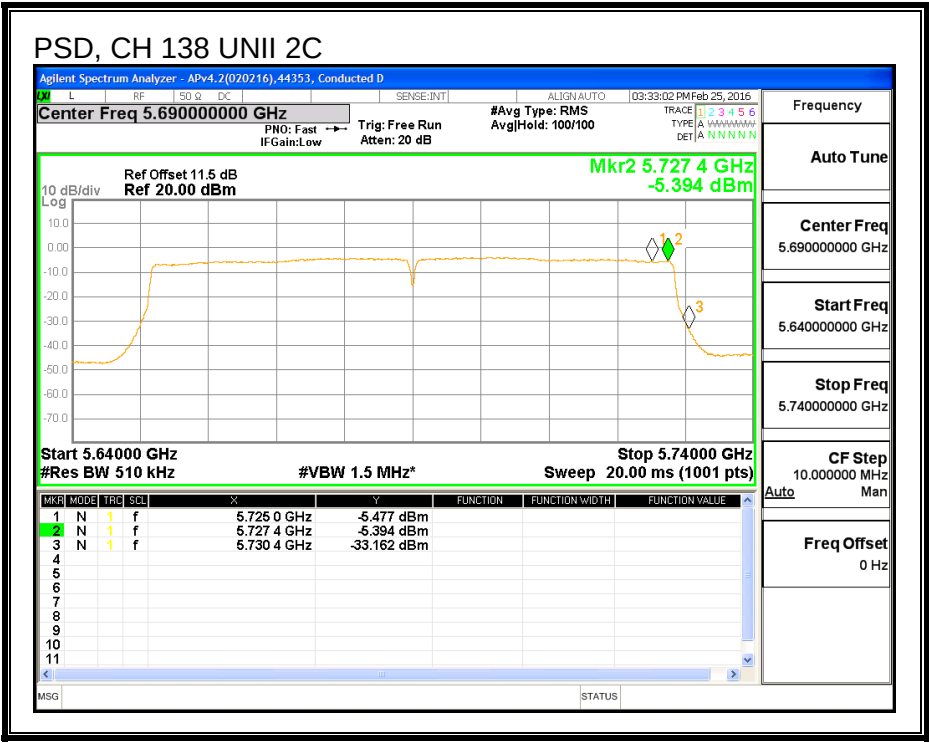
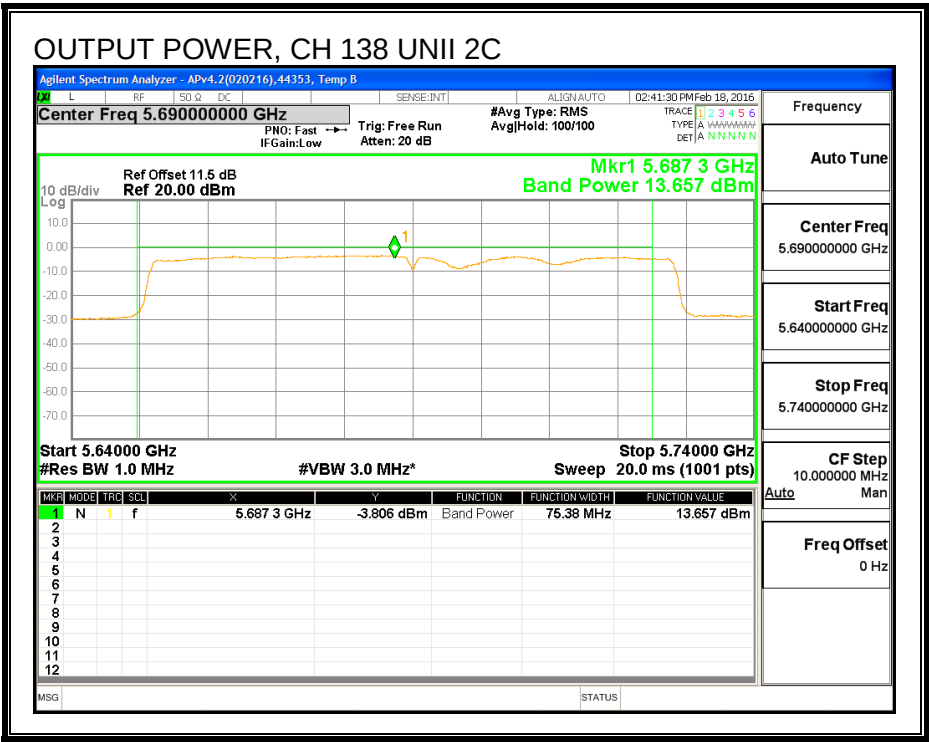
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	-0.92	-1.03	2.14	9.20	-7.06

OUTPUT POWER, CHAIN 0



OUTPUT POWER, CHAIN 1



UNII-3 BAND

Antenna Gain and Limit

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
138	5690	5.38	7.80	7.80	28.20	28.20

Duty Cycle CF (dB)	0.10	Included in Calculations of Corr'd Power & PSD
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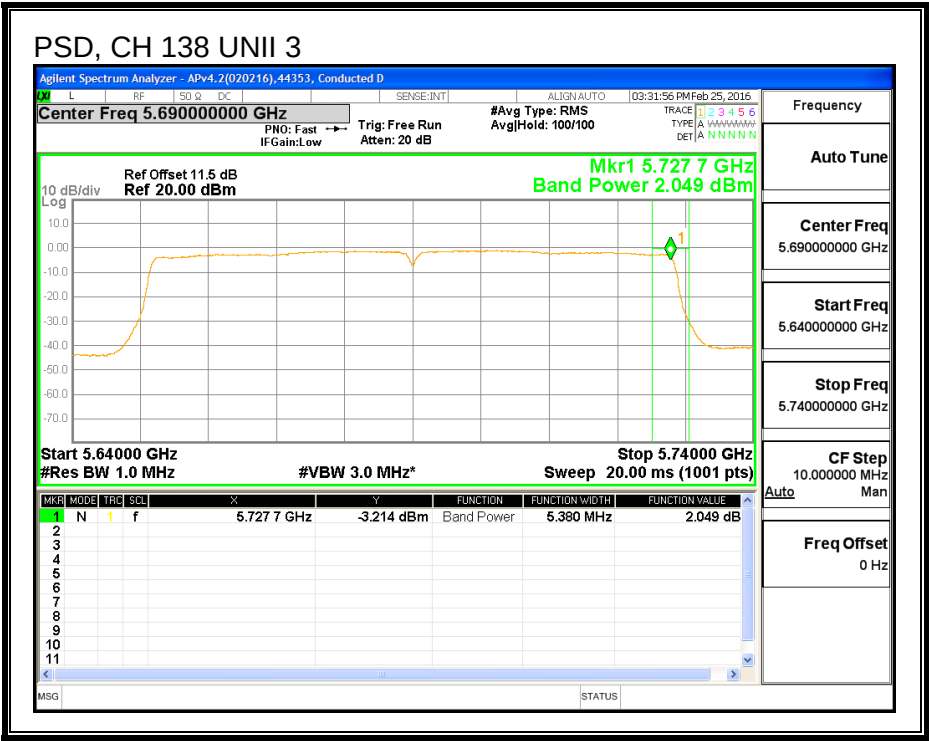
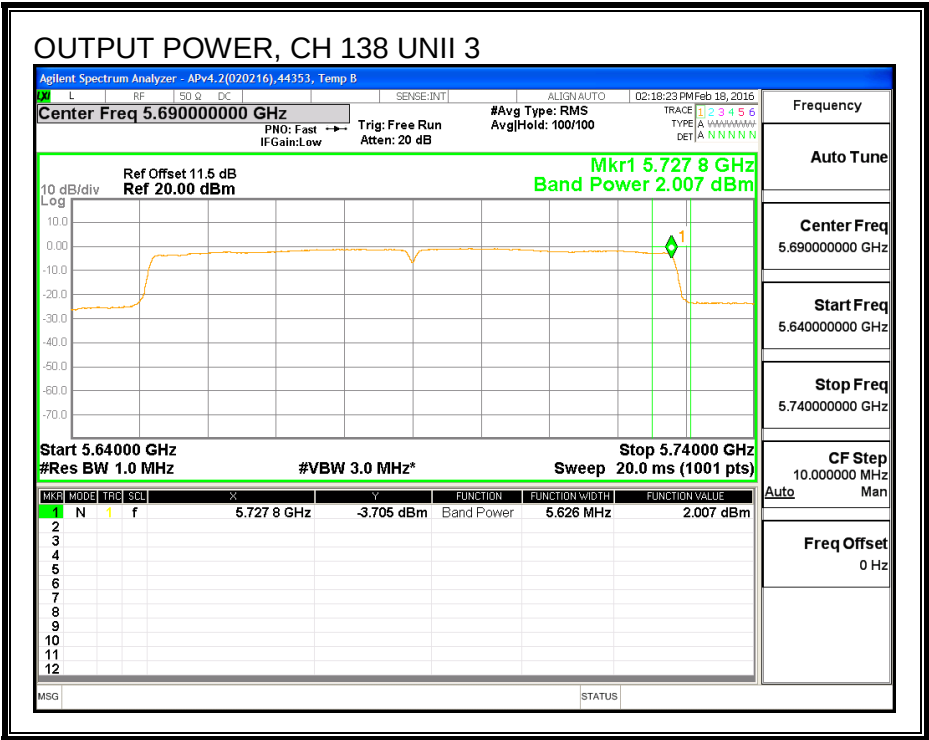
Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	2.01	2.05	5.14	28.20	-23.06

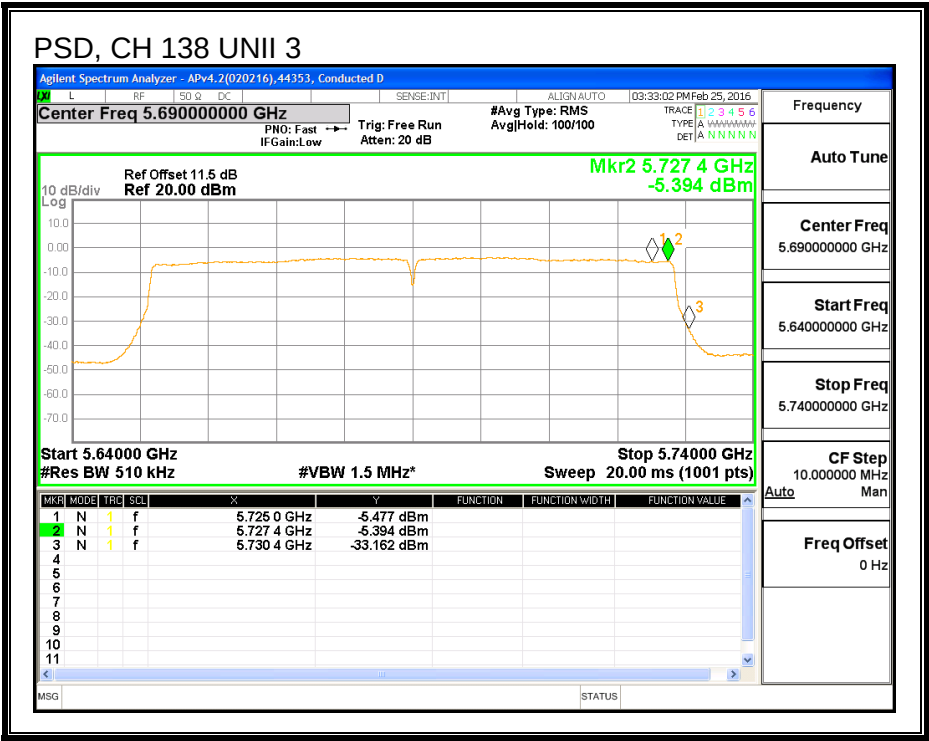
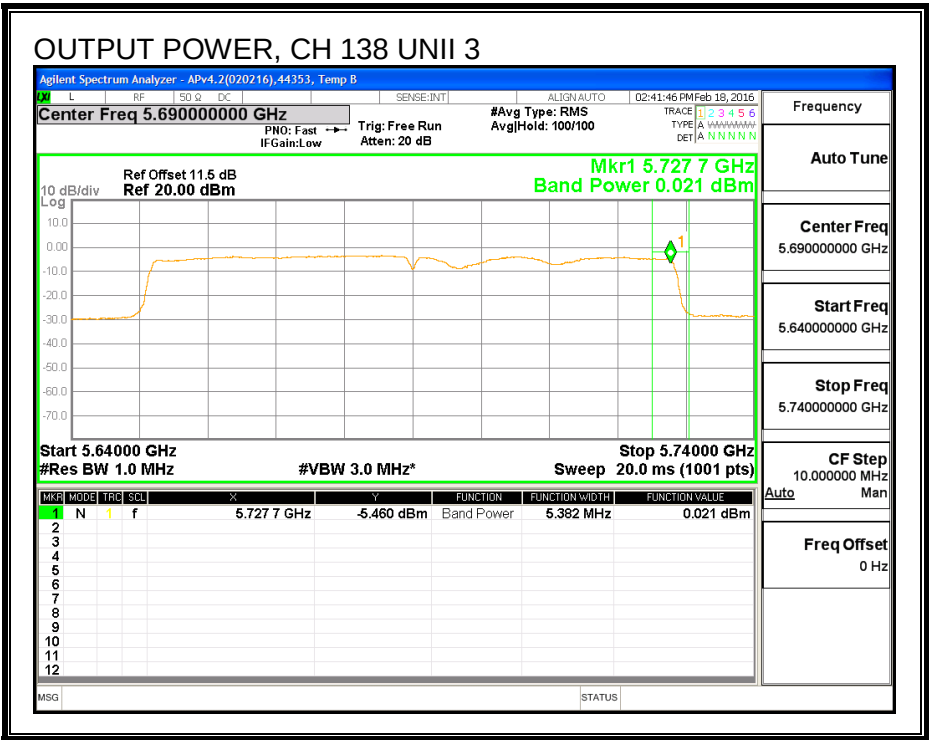
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	-5.72	-5.39	-2.44	28.20	-30.64

OUTPUT POWER, CHAIN 0



OUTPUT POWER, CHAIN 1



8.55.8. TPC POWER STRADDLE CHANNEL 138 RESULTS (FCC)

UNII-2C BAND

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
138	5690	75.38	7.80	7.80	22.20	9.20

Duty Cycle CF (dB)	0.10	Included in Calculations of Corr'd Power & PSD
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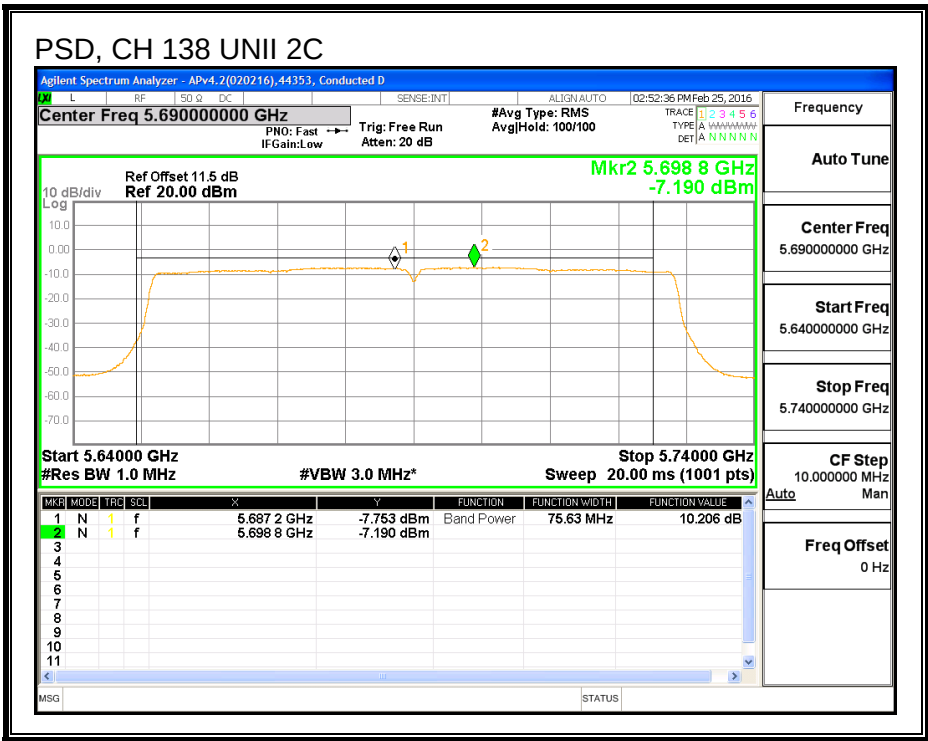
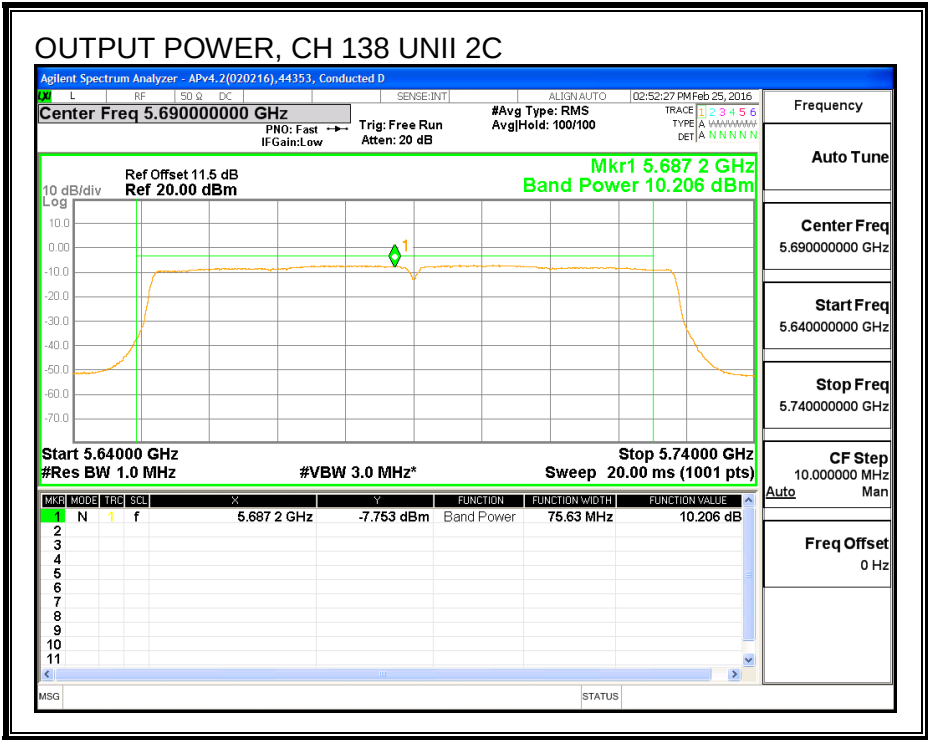
Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	10.21	10.29	13.36	22.20	-8.84

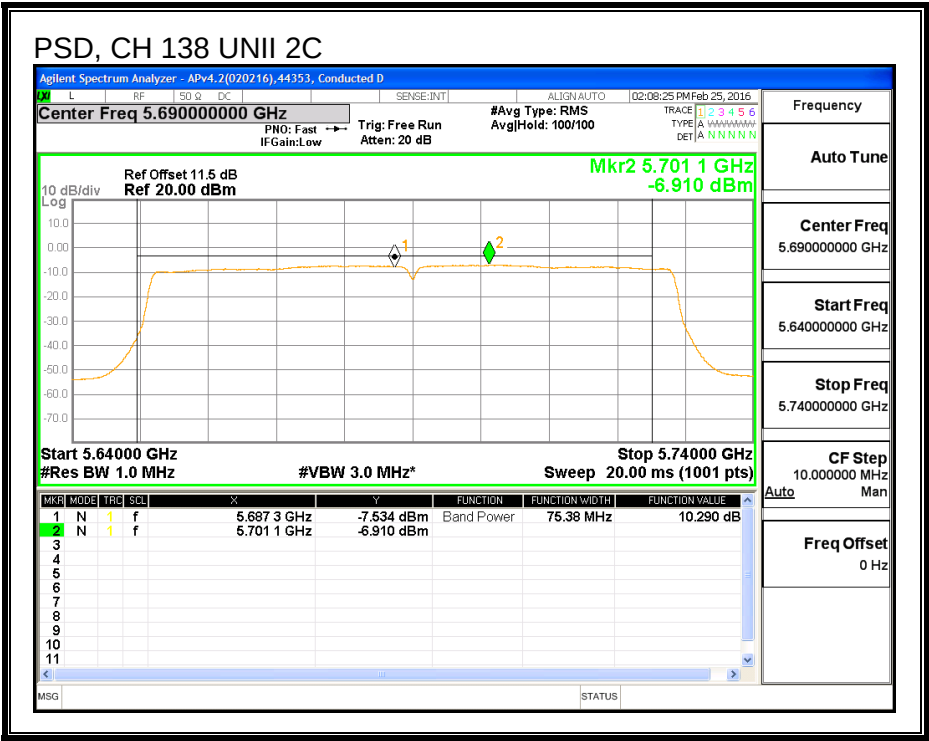
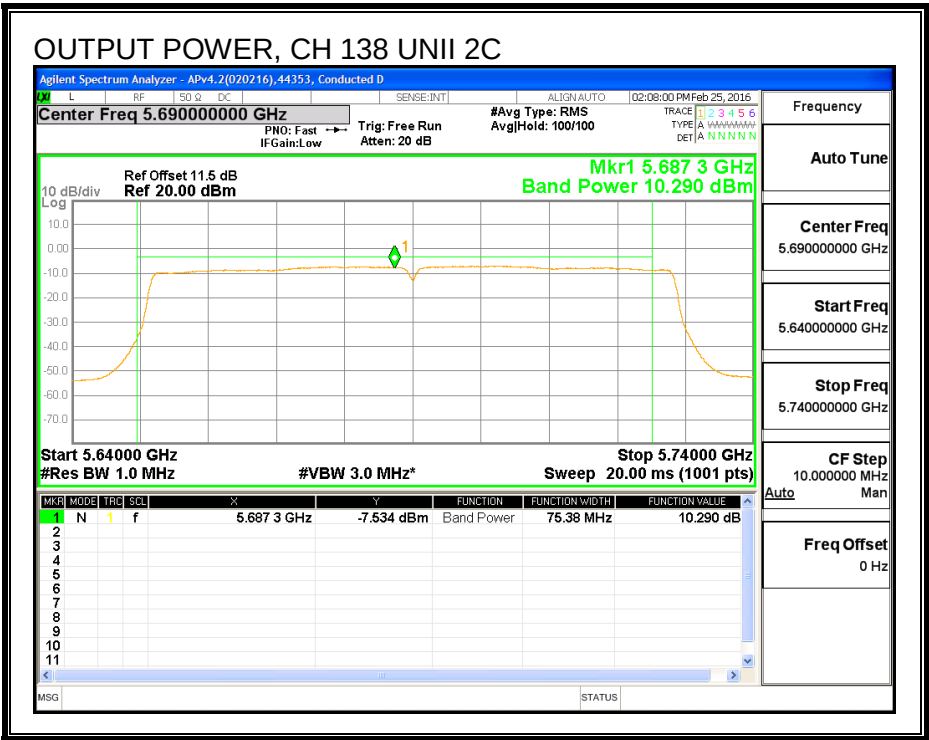
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	-7.19	-6.91	-3.94	9.20	-13.14

OUTPUT POWER, CHAIN 0



OUTPUT POWER, CH 138 UNII 2C



UNII-3 BAND

Antenna Gain and Limit

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
138	5690	5.38	7.80	7.80	28.20	28.20

Duty Cycle CF (dB)	0.10	Included in Calculations of Corr'd Power & PSD
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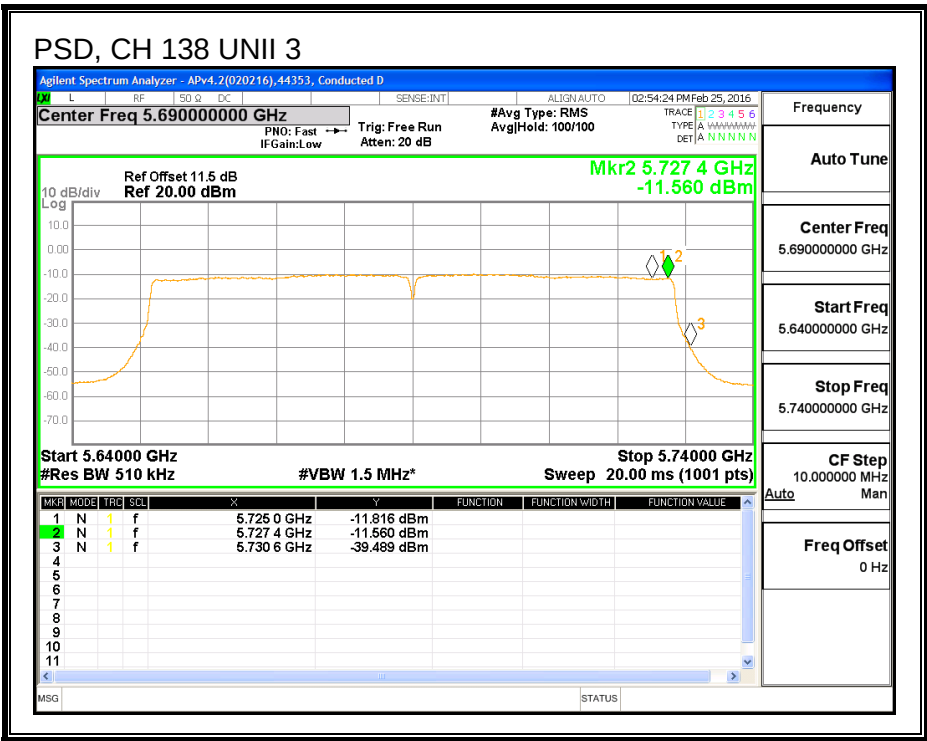
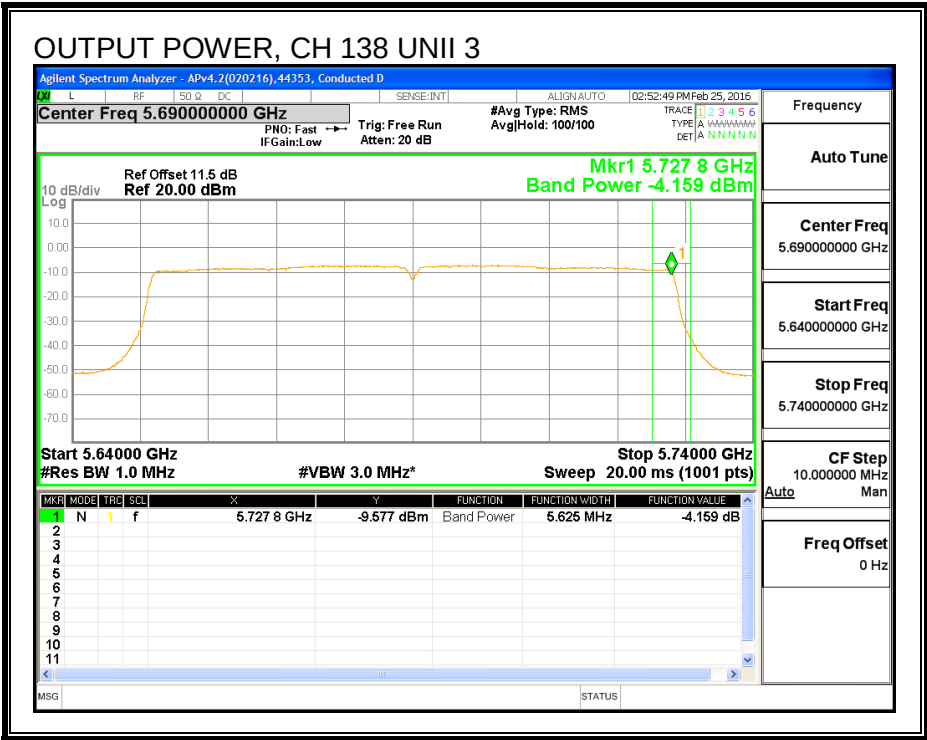
Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	-4.16	-3.82	-0.88	28.20	-29.08

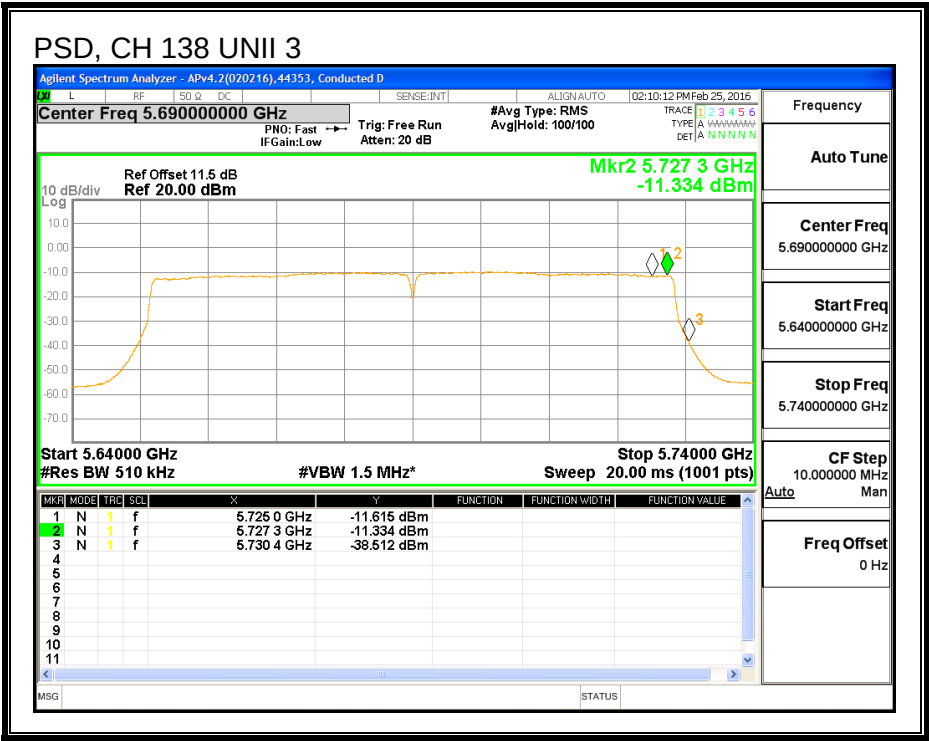
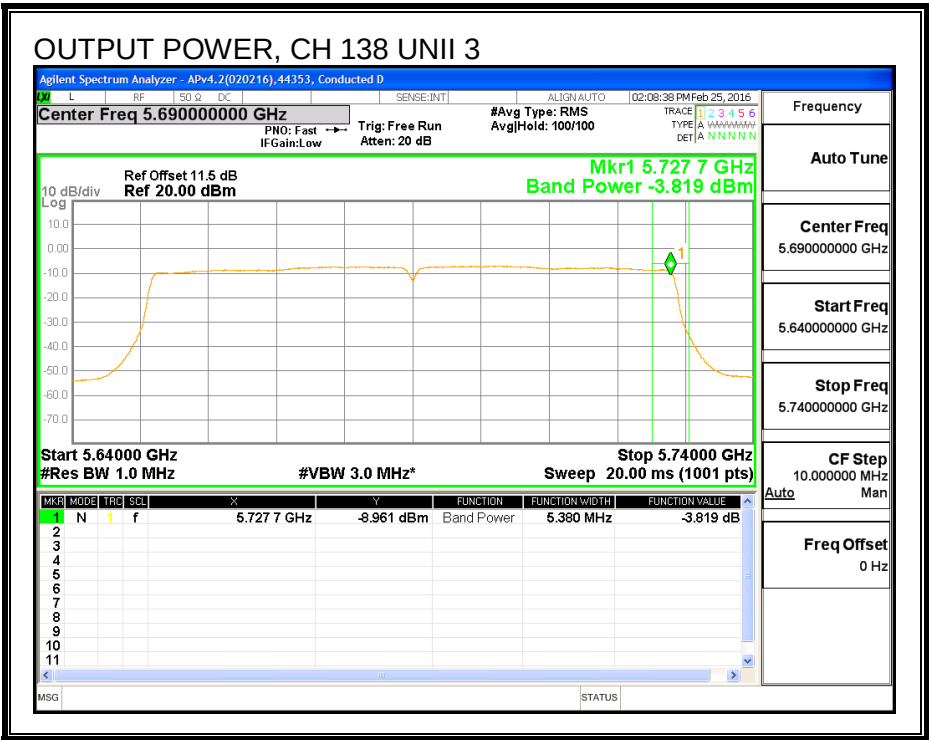
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	-11.56	-11.33	-8.34	28.20	-36.54

OUTPUT POWER, CHAIN 0



OUTPUT POWER, CHAIN 1



8.55.10. 6 dB BANDWIDTH

LIMITS

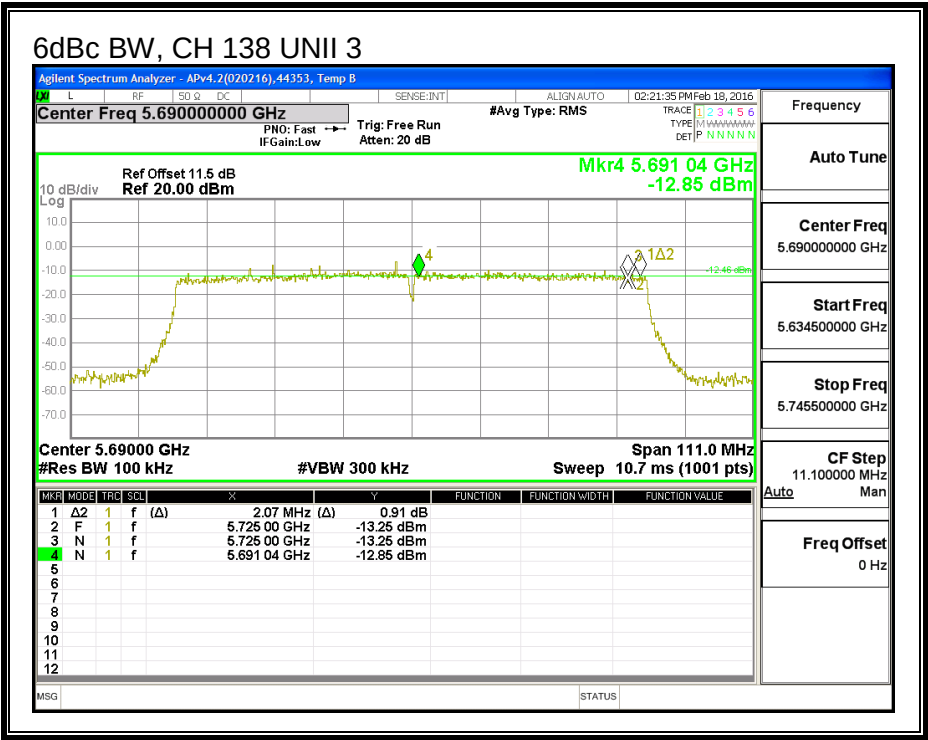
FCC §15.407 (e)

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

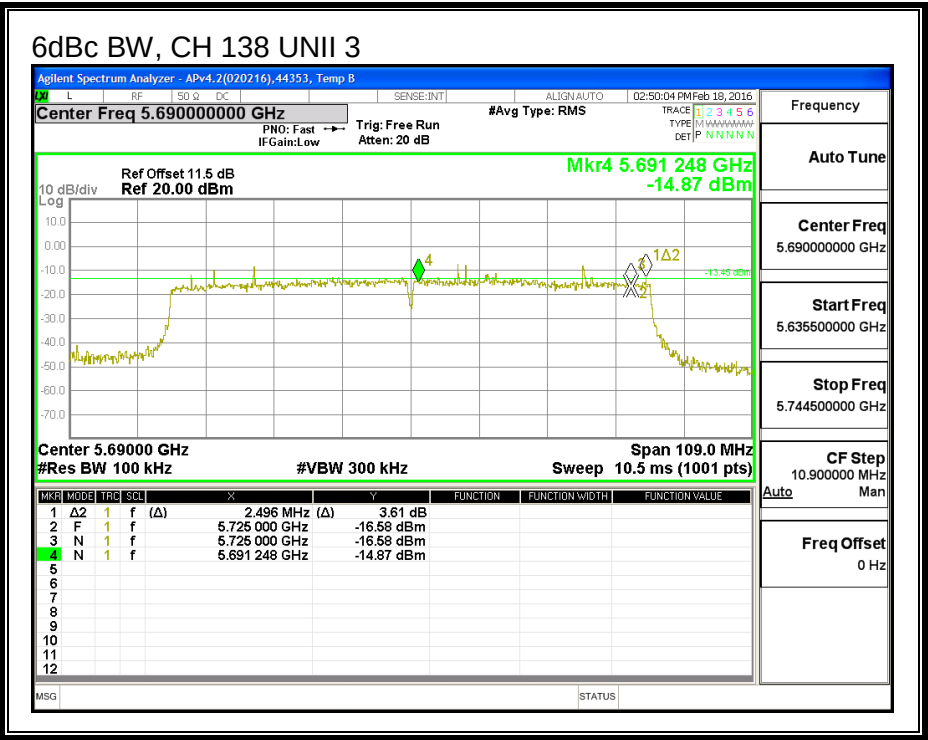
RESULTS

Channel	Frequency (MHz)	6 dB BW Chain 0 (MHz)	6 dB BW Chain 1 (MHz)
High	5690	2.07	2.50

CHAIN 0



CHAIN 1



8.56. 802.11n HT20 CHAIN 0 MODE IN THE 5.8 GHz BAND

8.56.1. 6 dB BANDWIDTH

LIMITS

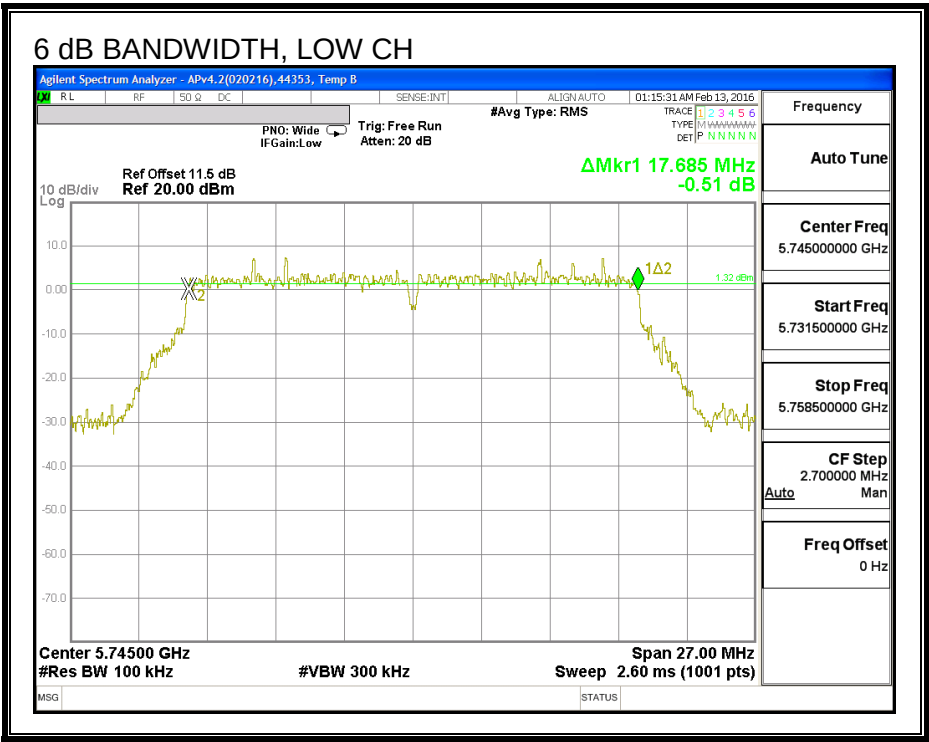
FCC §15.407 (e)

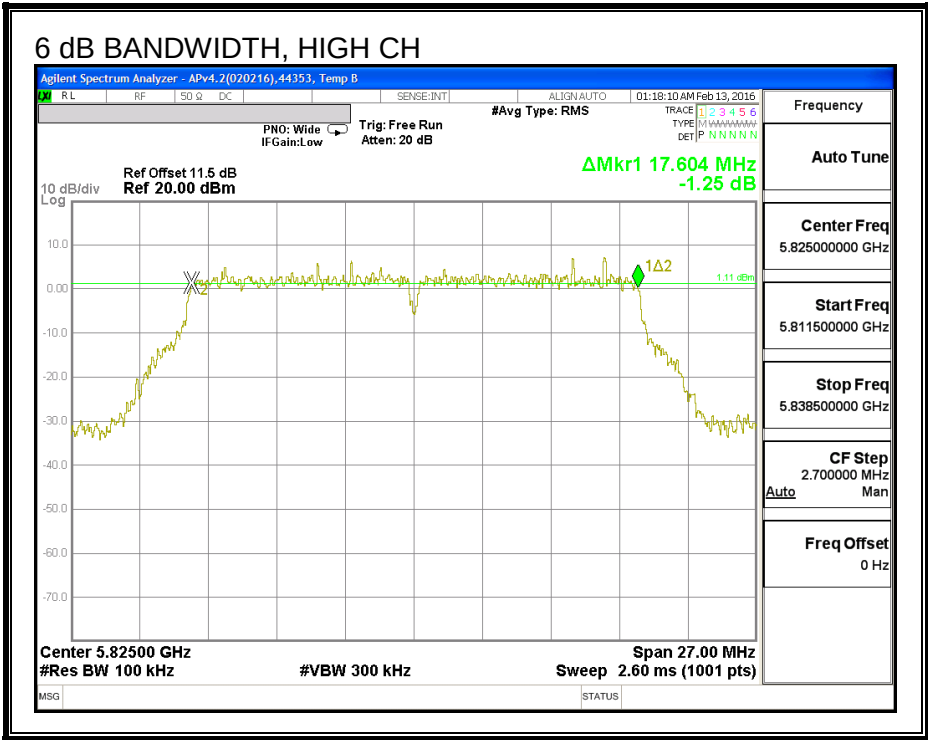
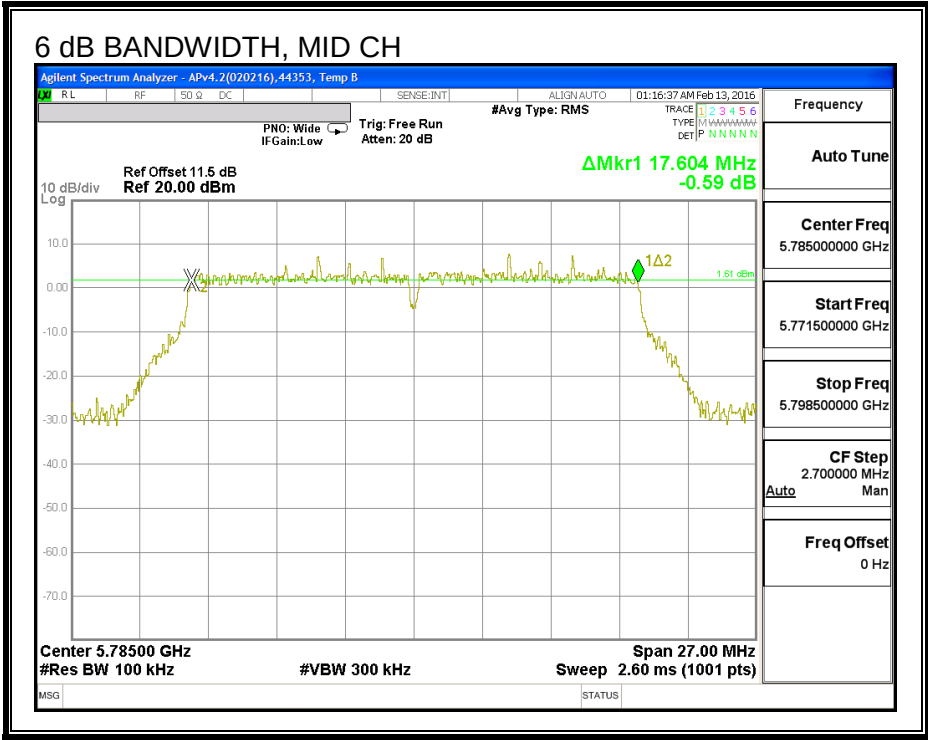
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5745	17.69	0.5
Mid	5785	17.60	0.5
High	5825	17.60	0.5

6 dB BANDWIDTH





8.56.2. 26 dB BANDWIDTH

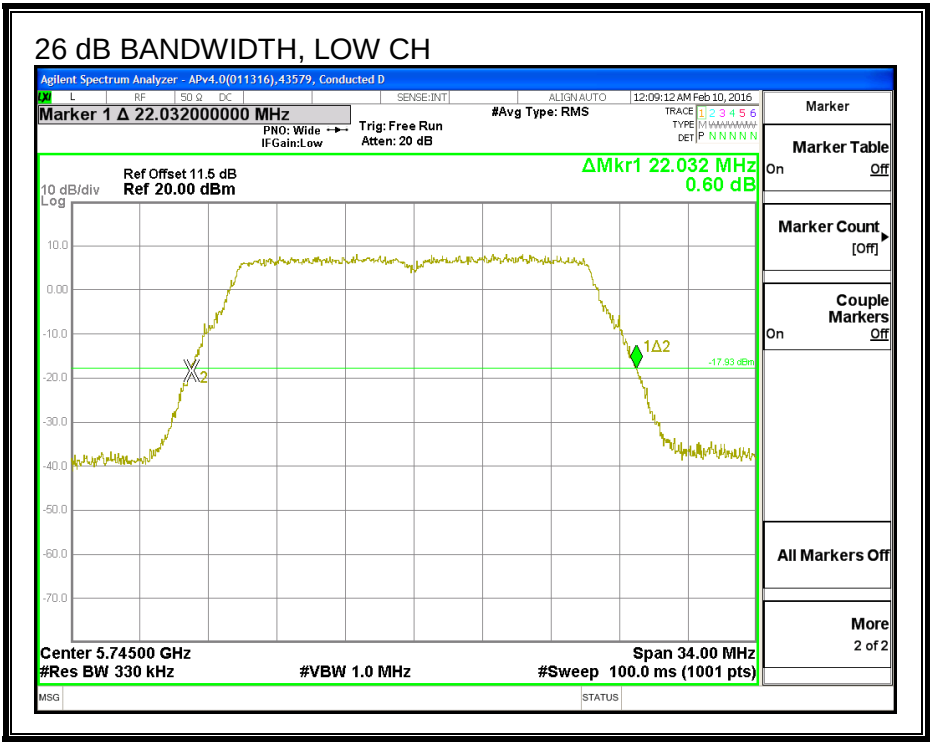
LIMITS

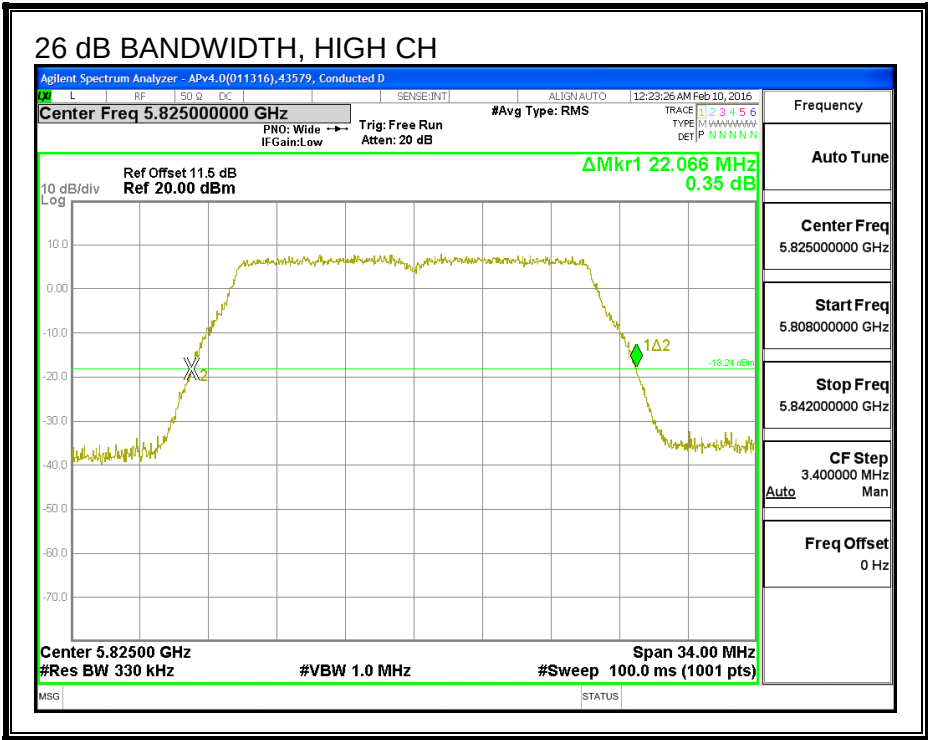
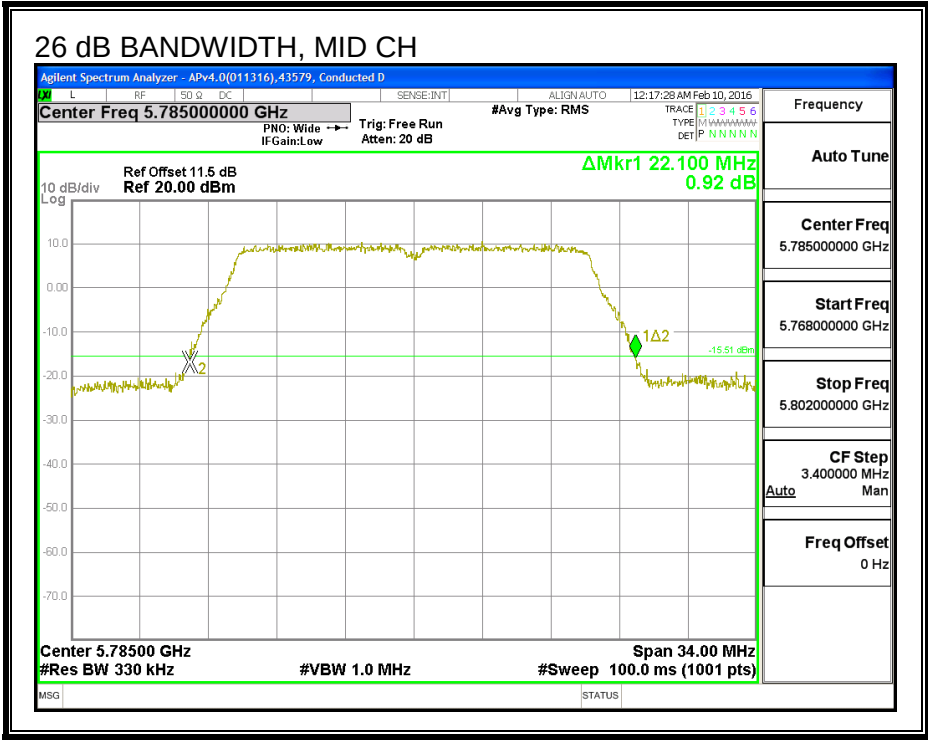
None, for reporting purposes only

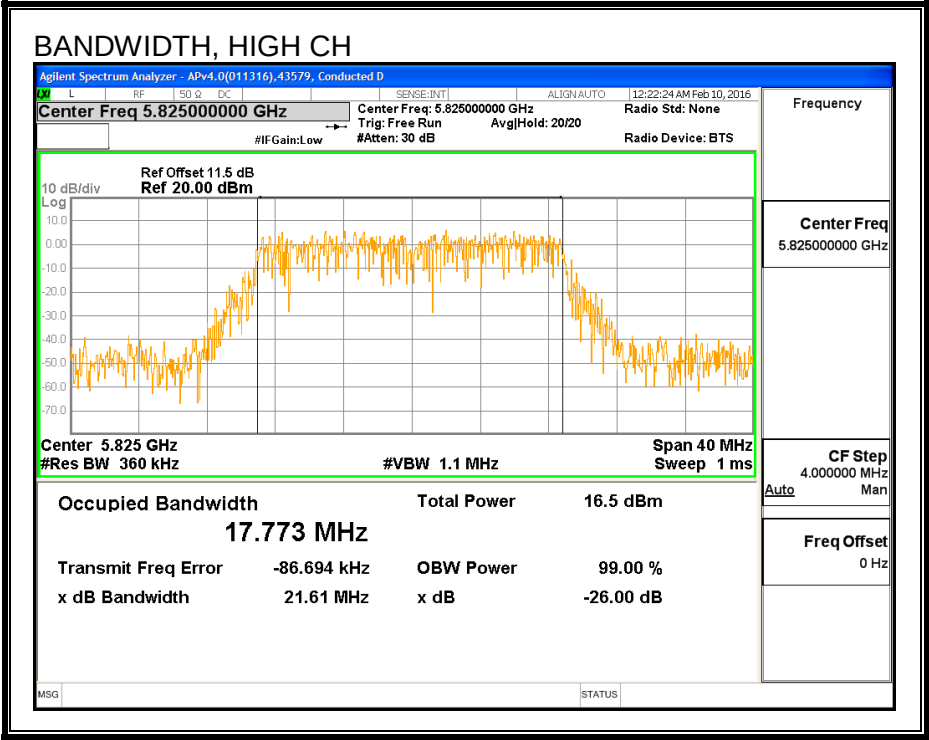
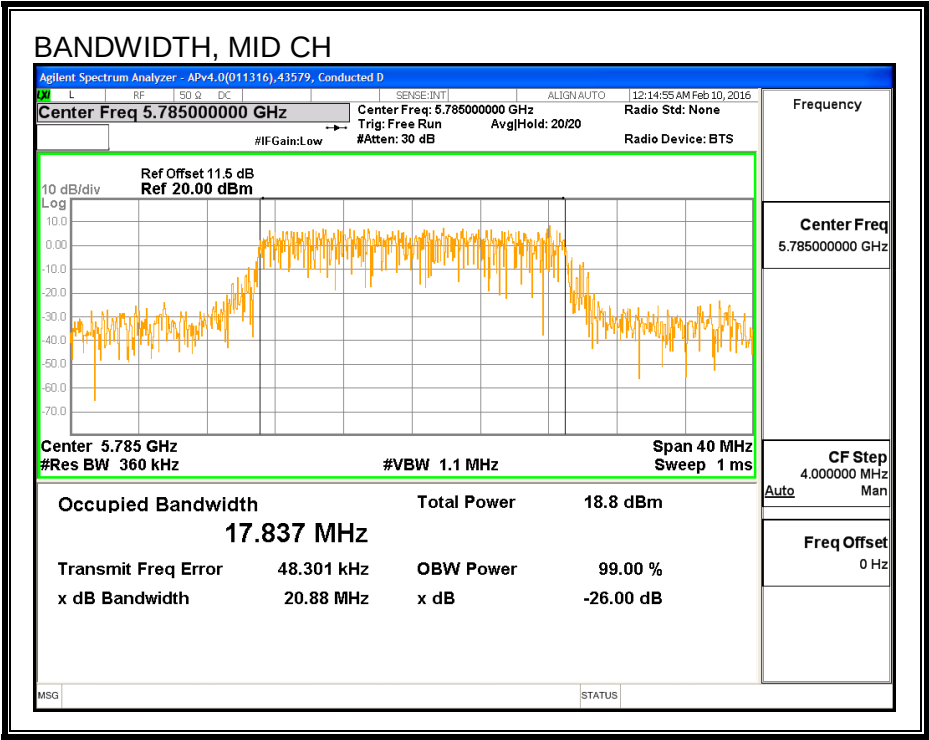
RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5745	22.03
Mid	5785	22.10
High	5825	22.07

26 dB BANDWIDTH







8.56.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Low	5745	15.92
Mid	5785	18.00
High	5825	16.38

8.56.5. OUTPUT POWER

LIMITS

FCC §15.407 (a) (3)

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.

TEST PROCEDURE

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

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 for Power (dBi)	Power Limit (dBm)
Low	5745	4.78	30.00
Mid	5785	4.78	30.00
High	5825	4.78	30.00

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	15.92	15.92	30.00	-14.08
Mid	5785	18.00	18.00	30.00	-12.00
High	5825	16.38	16.38	30.00	-13.62

8.56.6. PSD

LIMITS

FCC §15.407 (a) (3)

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

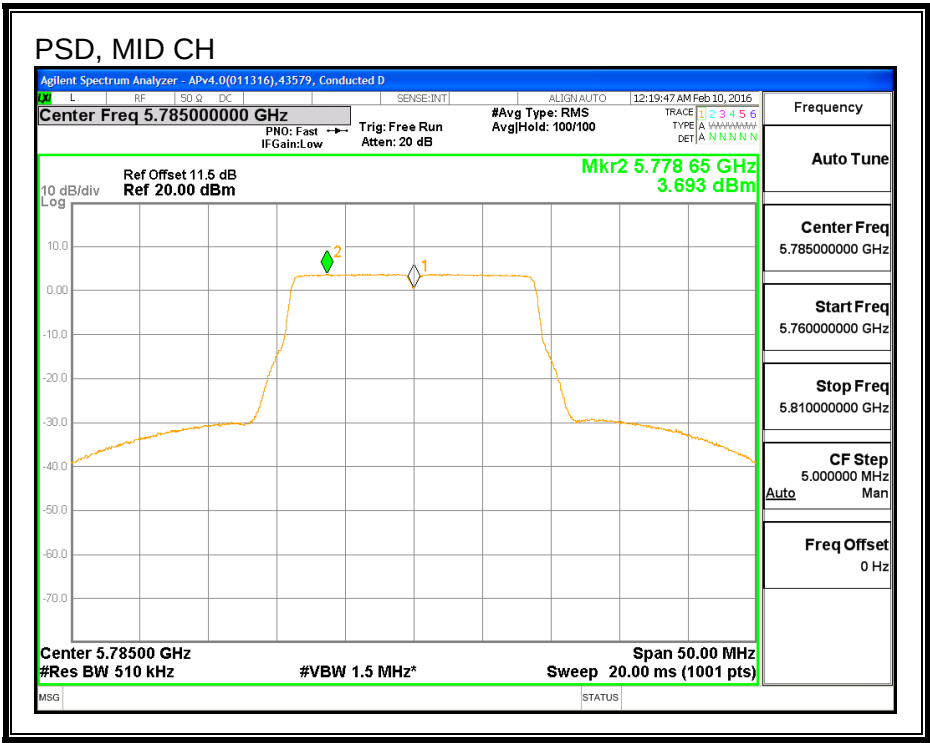
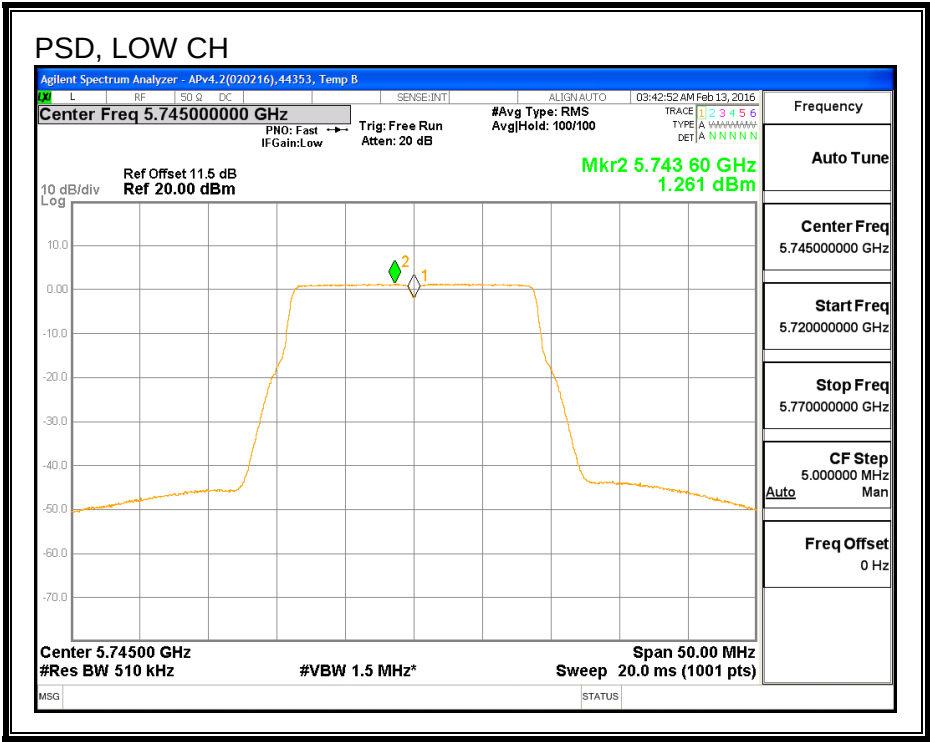
Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5745	4.78	30.00
Mid	5785	4.78	30.00
High	5825	4.78	30.00

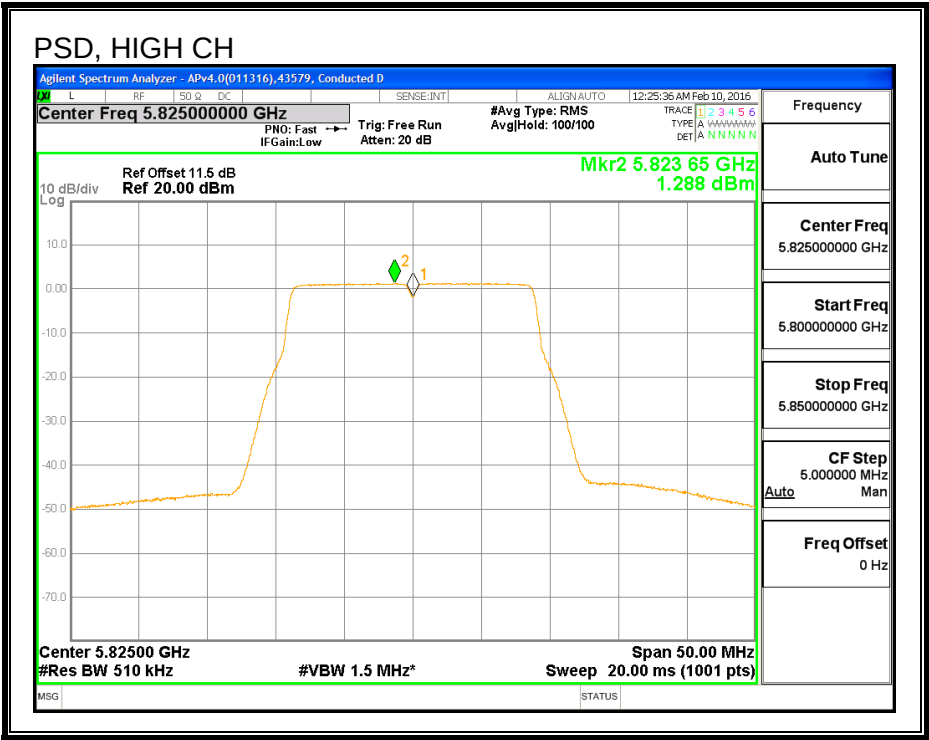
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD
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PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5745	1.26	1.26	30.00	-28.74
Mid	5785	3.69	3.69	30.00	-26.31
High	5825	1.29	1.29	30.00	-28.71

PSD





8.57. 802.11n HT20 CHAIN 1 MODE IN THE 5.8 GHz BAND

8.57.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

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

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5745	17.63	0.5
Mid	5785	17.69	0.5
High	5825	17.63	0.5

6 dB BANDWIDTH

