8.27.4. OUTPUT POWER AND PPSD

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. However, PSD measurement was measured by Spectrum Analyzer and duty cycle 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.

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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	5510	40.50	36.43	-0.96	24.00	11.00
Mid	5550	40.50	36.25	-0.96	24.00	11.00
Mid	5590	40.50	36.25	-0.96	24.00	11.00
High	5630	40.20	36.17	-0.96	24.00	11.00
High	5670	40.60	36.33	-0.96	24.00	11.00

Duty Cycle CF (dB)	0.10	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5510	15.80	15.80	24.00	-8.20
Mid	5550	18.83	18.83	24.00	-5.17
Mid	5590	19.26	19.26	24.00	-4.74
High	5630	18.44	18.44	24.00	-5.56
High	5670	17.29	17.29	24.00	-6.71

PSD Results

Channel	Frequency (MHz)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5510	2.21	2.31	11.00	-8.70
Mid	5550	6.22	6.32	11.00	-4.68
Mid	5590	5.00	5.10	11.00	-5.90
High	5630	4.53	4.63	11.00	-6.37
High	5670	5.08	5.18	11.00	-5.82

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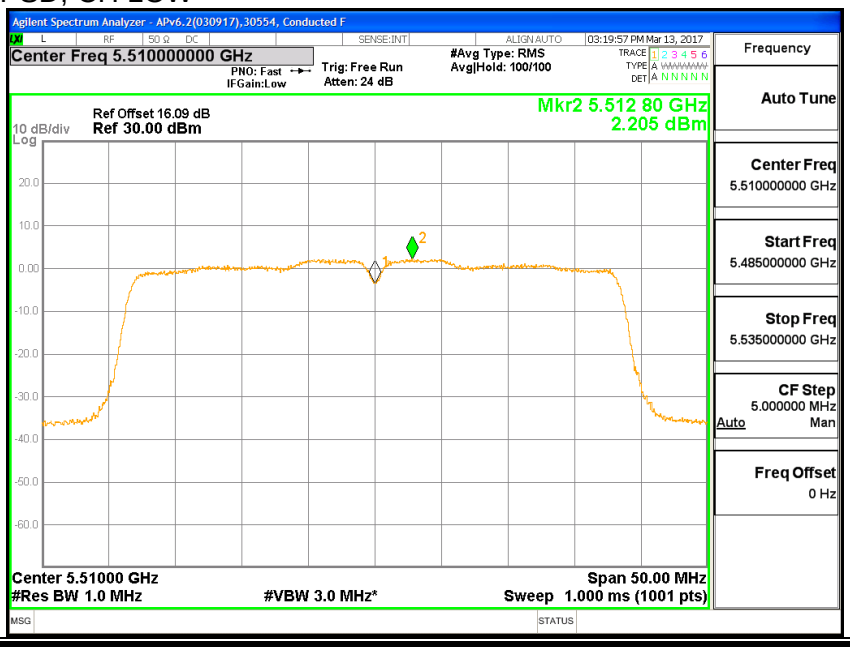
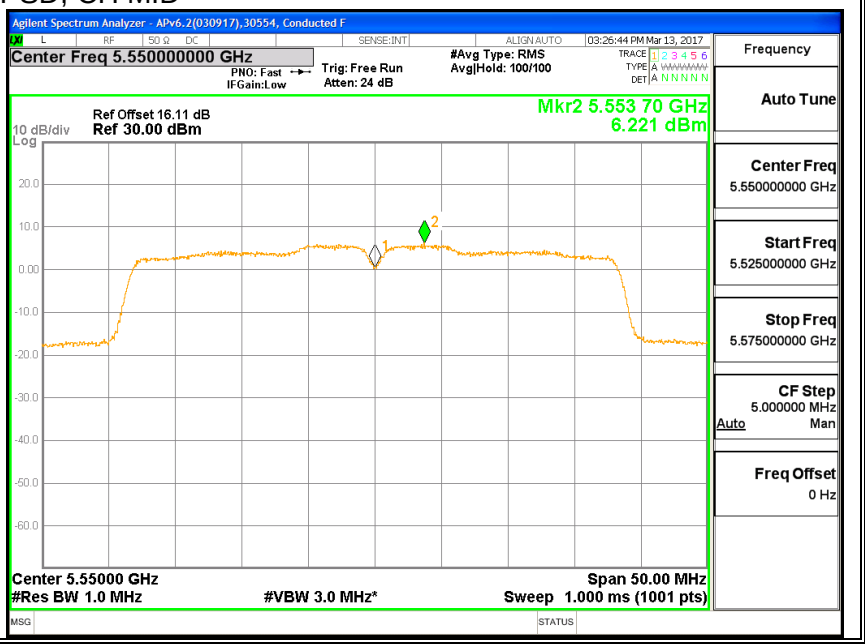
PSD, CH LOW



PSD, CH MID



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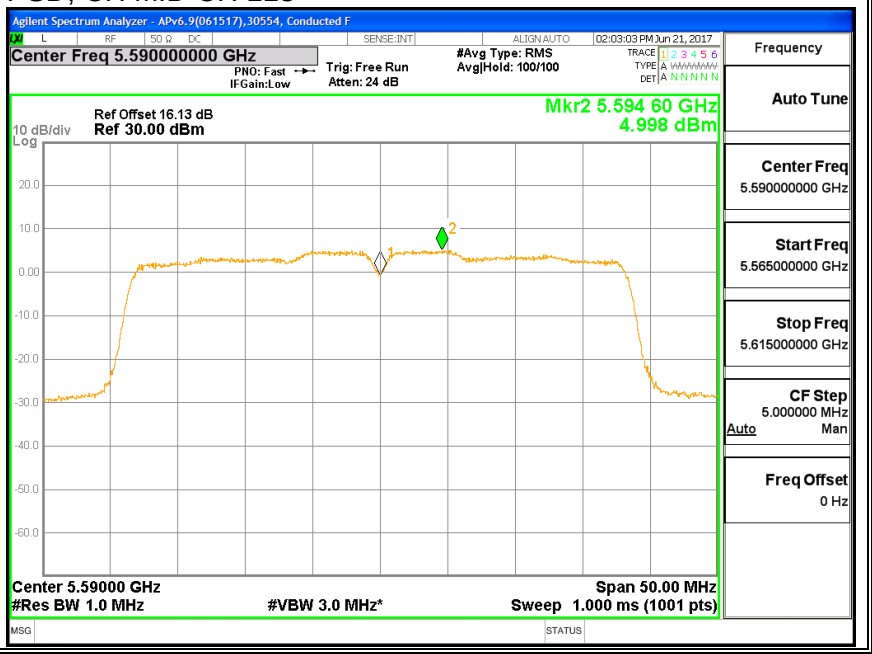
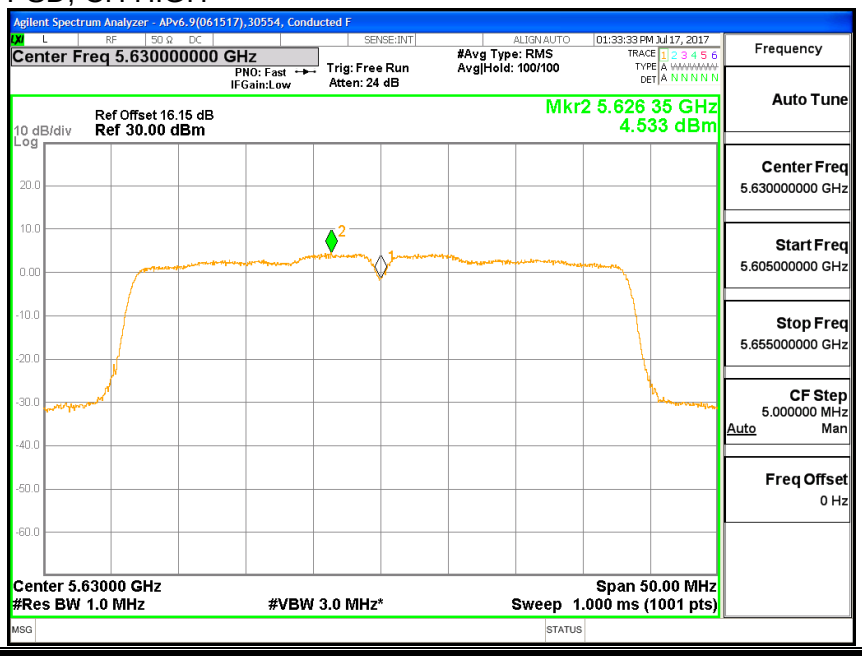
PSD, CH MID CH 118



PSD, CH HIGH



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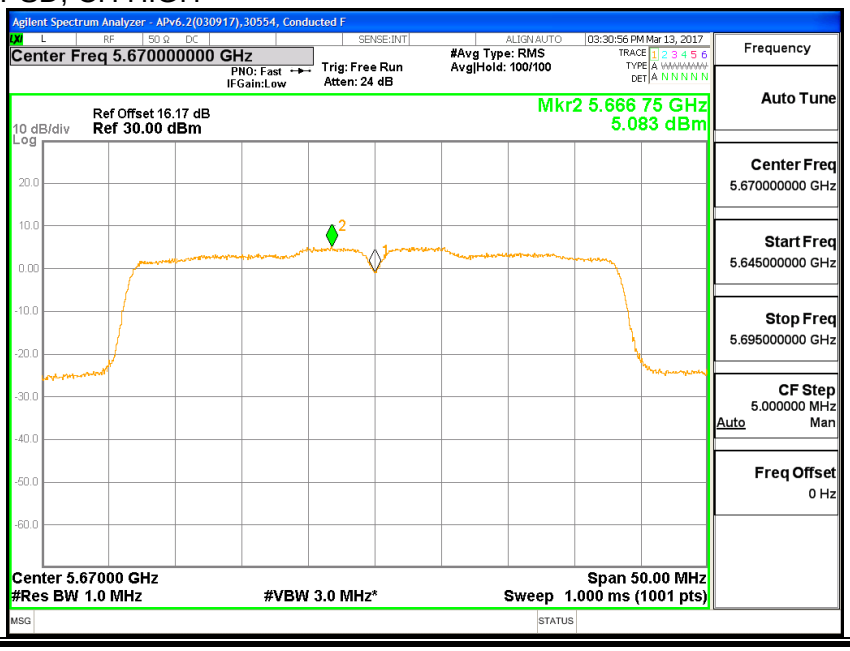
PSD, CH HIGH



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8.28. 11ac HT40 LAT 3 SISO STRADDLE CHANNEL 142

8.28.1. OUTPUT POWER AND PPSD

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)
142	5710	35.25	-0.96	-0.96	24.00	11.00

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

Output Power Results

Channel	Frequency (MHz)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
142	5710	18.64	18.74	24.00	-5.26

PSD Results

Channel	Frequency (MHz)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
142	5710	5.83	5.93	11.00	-5.07

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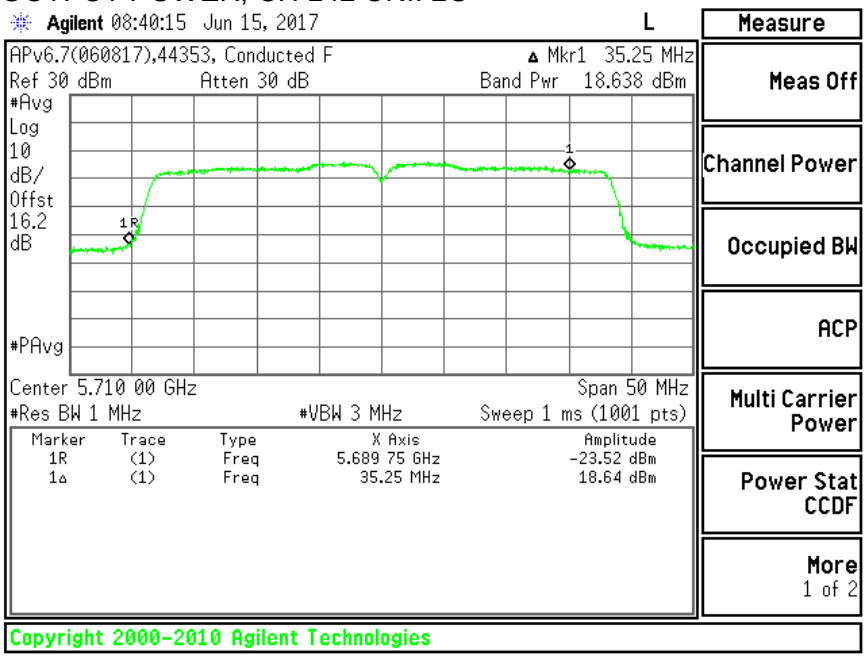
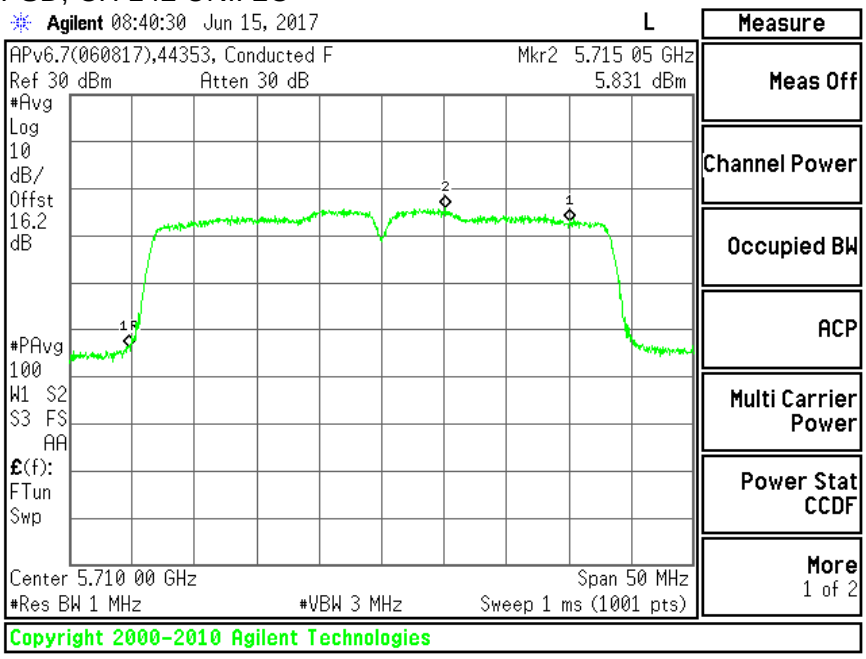
OUTPUT POWER, CH 142 UNII 2C



PSD, CH 142 UNII 2C



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UNII-3 BAND

Antenna Gain and Limit

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
142	5710	5.25	-0.93	30.00	30.00

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

Output Power Results

Channel	Frequency (MHz)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
142	5710	7.46	7.56	30.00	-22.44

PSD Results

Channel	Frequency (MHz)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
142	5710	0.75	0.85	30.00	-29.15

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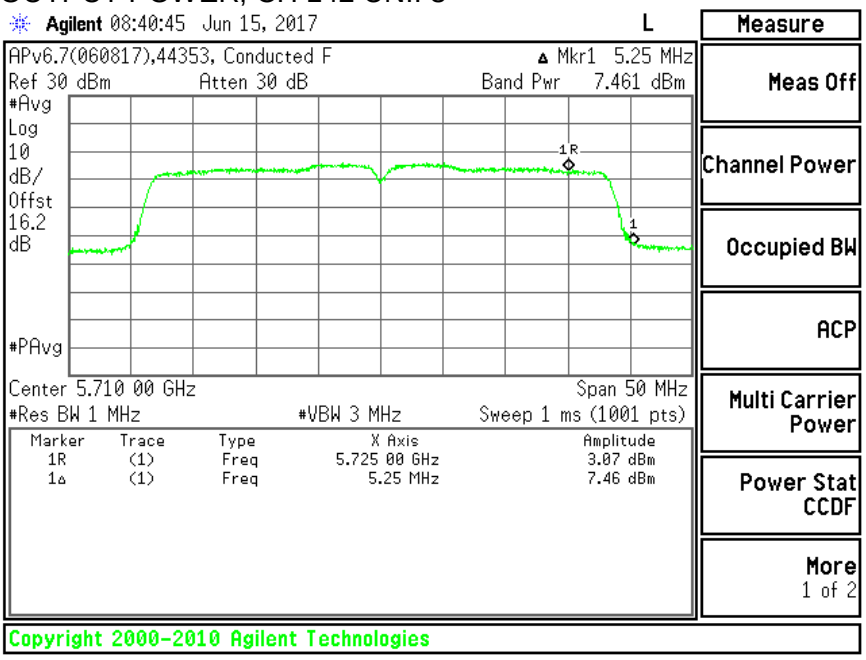
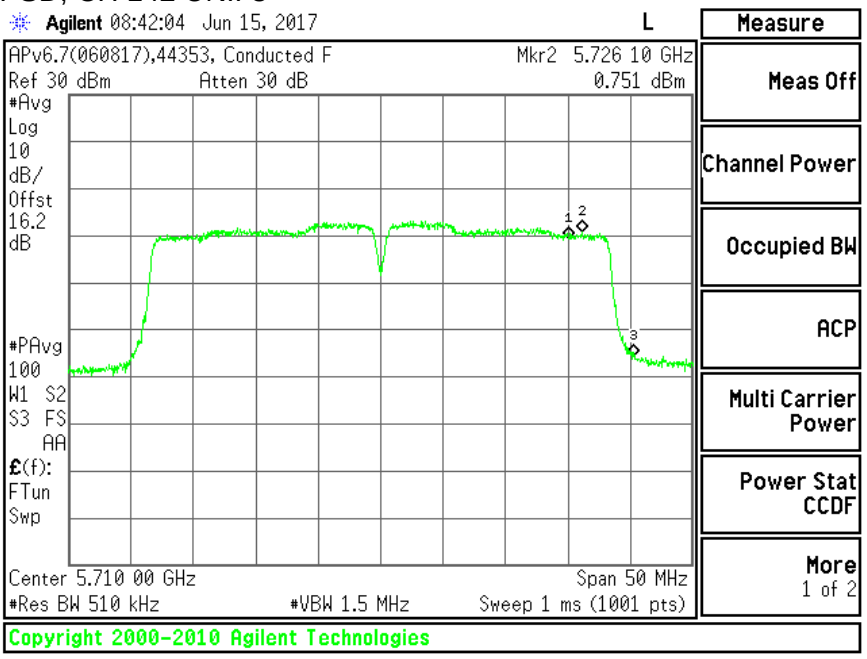
OUTPUT POWER, CH 142 UNII 3



PSD, CH 142 UNII 3



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8.28.2. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

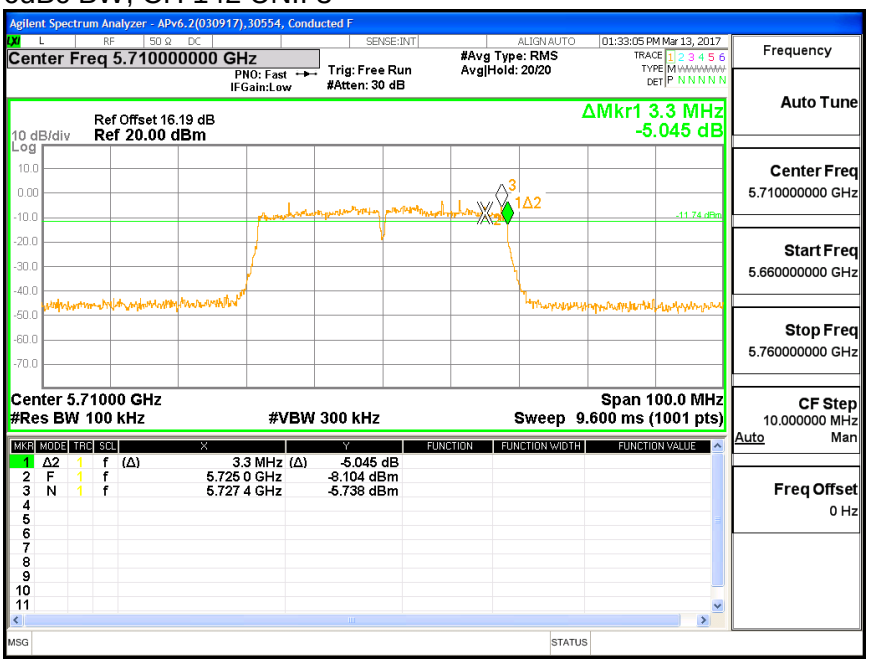
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)
142	5710	3.300

6 dB BANDWIDTH

6dBc BW, CH 142 UNII 3



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8.29. 11n HT40 2TX CDD MIMO MODE IN THE 5.6GHz BAND

8.29.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency	26 dB BW UAT 2 (MHz)	26 dB BW LAT 3 (MHz)
Low	5510	40.6	40.2
Mid	5550	40.6	40.2
Mid	5590	40.8	40.7
High	5630	40.5	40.1
High	5670	40.7	40.1
142	5710	40.5	40.1

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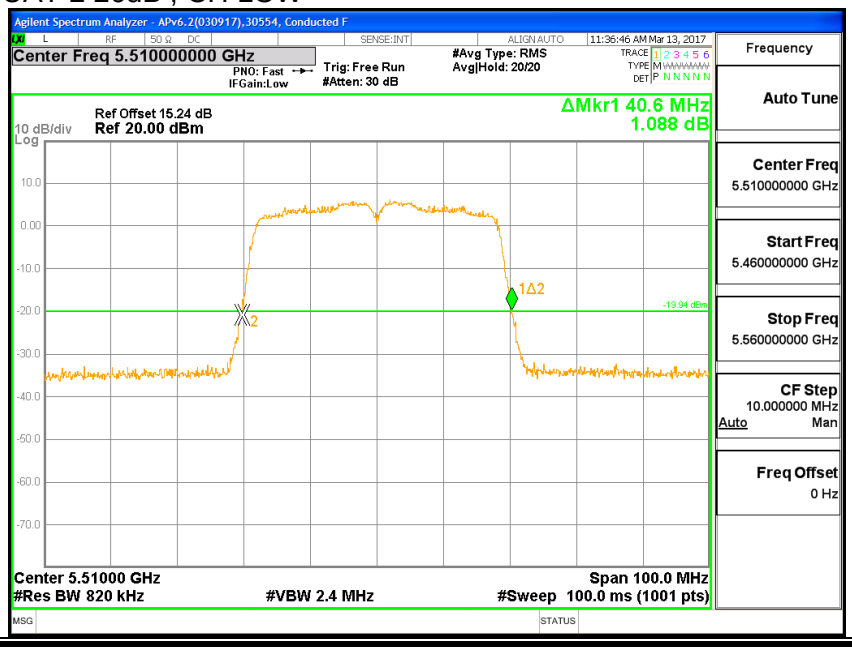
UAT 2 26dB , CH LOW



LAT 3 26dB , CH LOW

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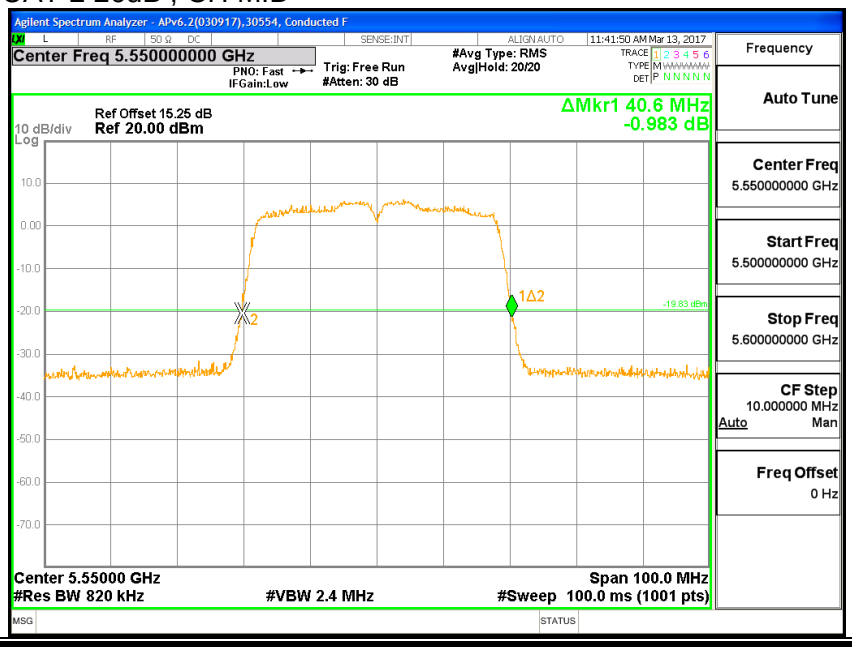
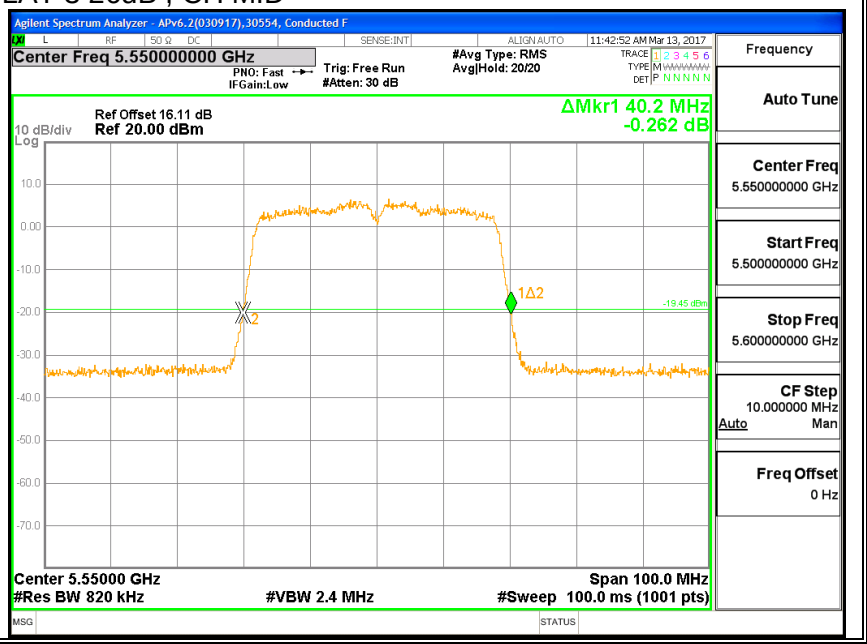
UAT 2 26dB , CH MID



LAT 3 26dB , CH MID



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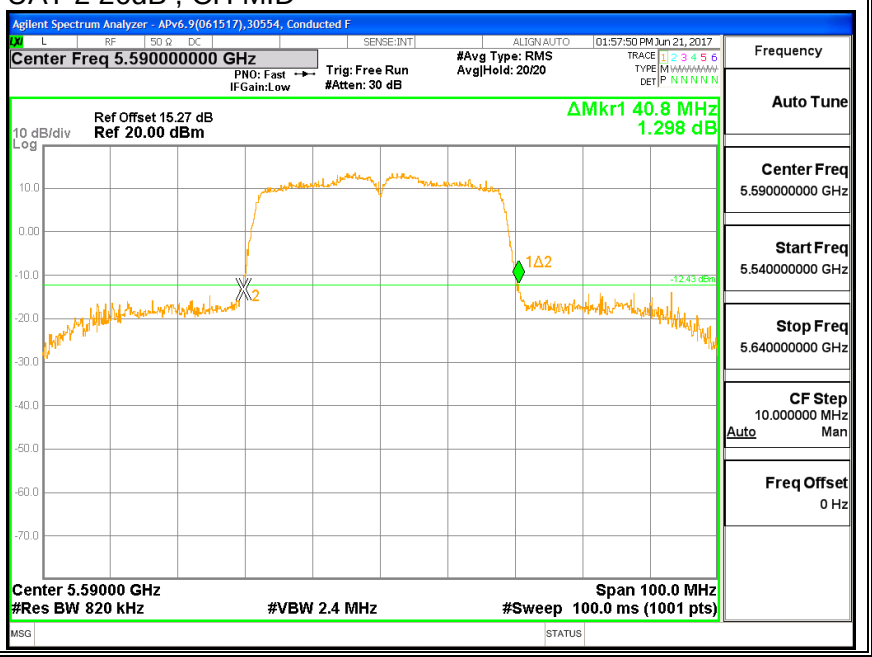
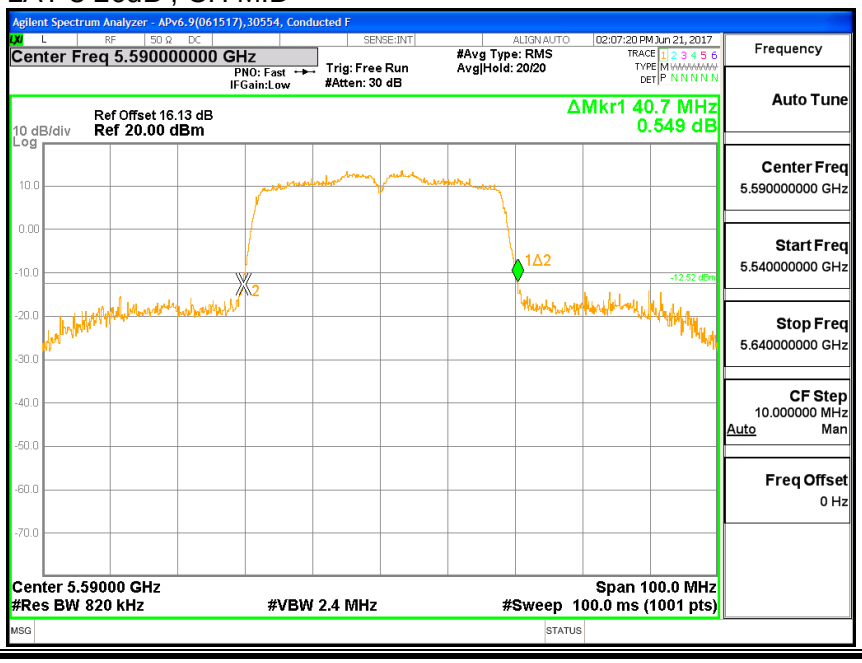
UAT 2 26dB , CH MID



LAT 3 26dB , CH MID



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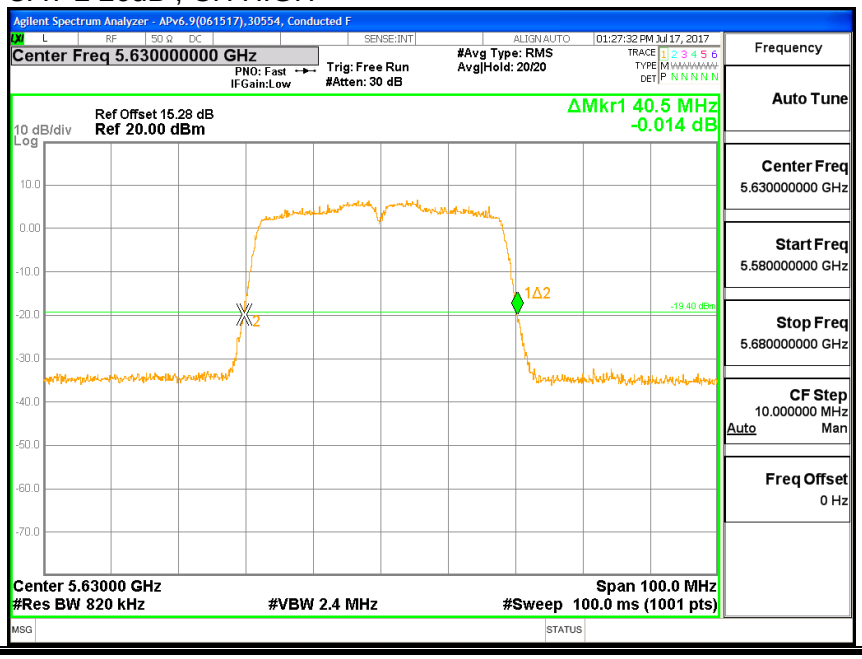
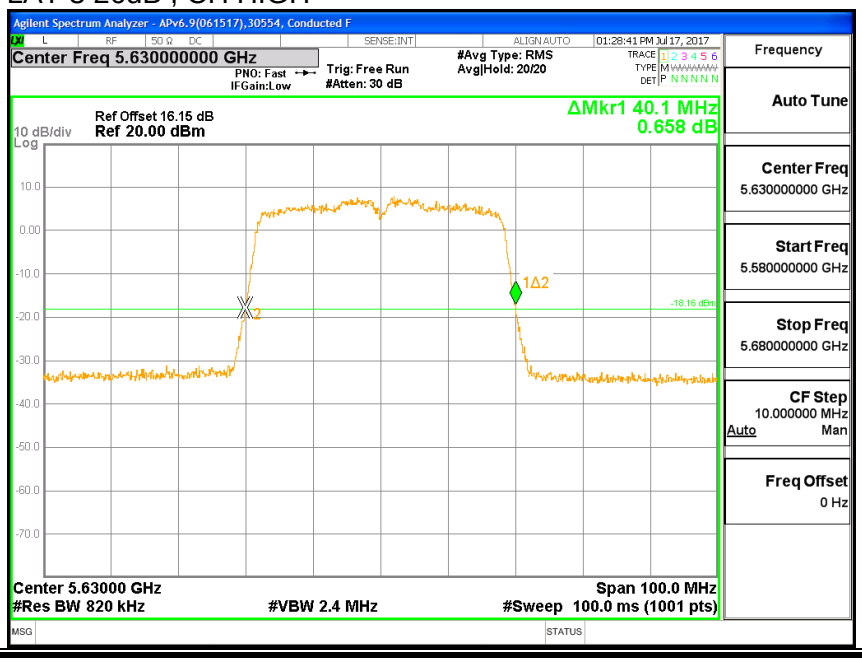
UAT 2 26dB , CH HIGH



LAT 3 26dB , CH HIGH



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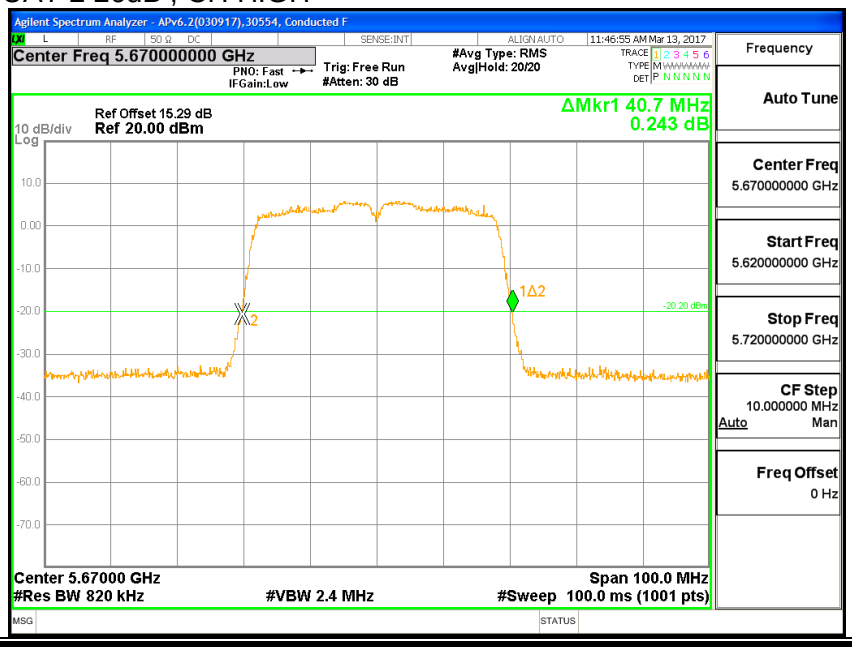
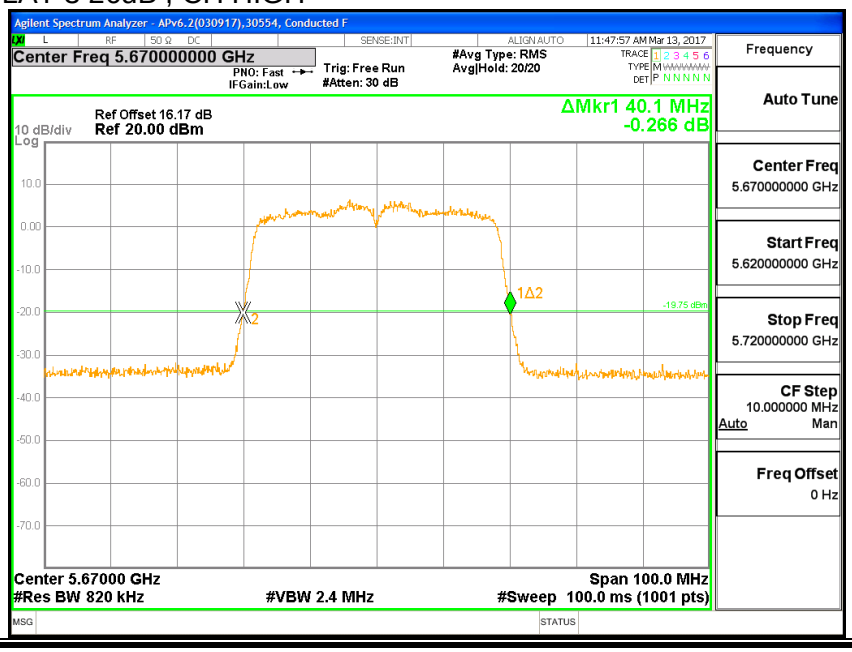
UAT 2 26dB , CH HIGH



LAT 3 26dB , CH HIGH



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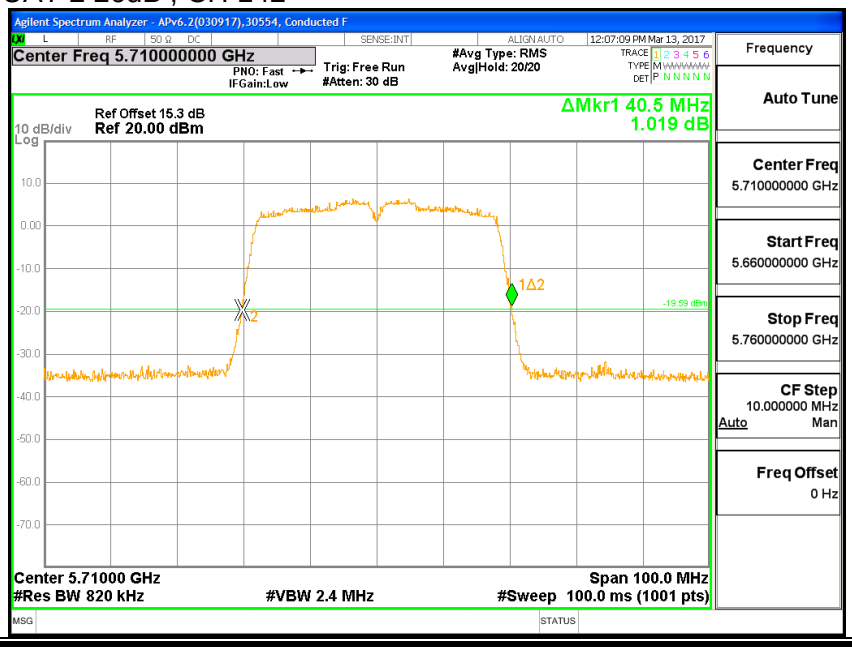
UAT 2 26dB , CH 142



LAT 3 26dB , CH 142

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8.29.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency	99% BW UAT 2 (MHz)	99% BW LAT 3 (MHz)
Low	5510	36.286	36.280
Mid	5550	36.074	36.154
Mid	5590	36.456	36.428
High	5630	36.162	36.268
High	5670	36.219	36.420
142	5710	36.195	36.100

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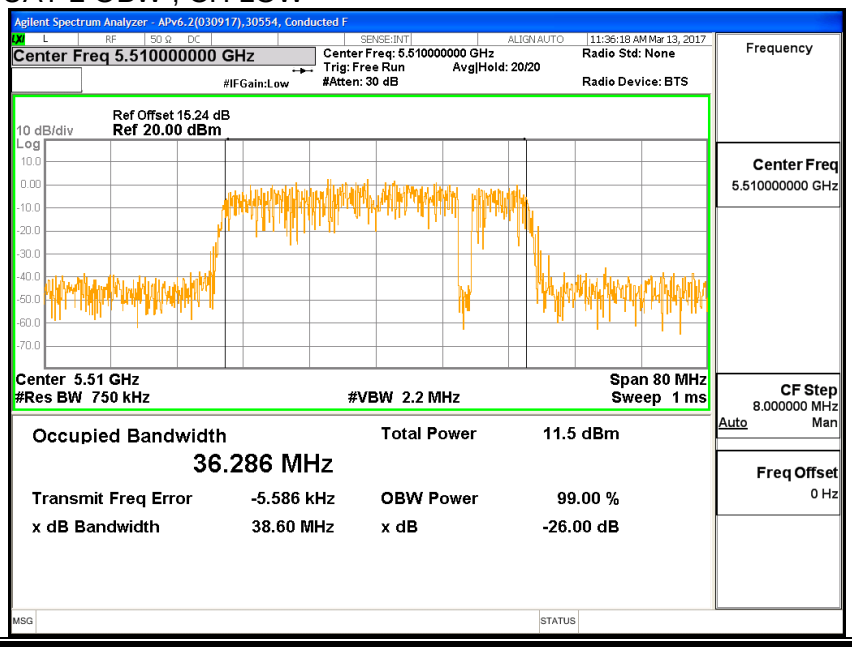
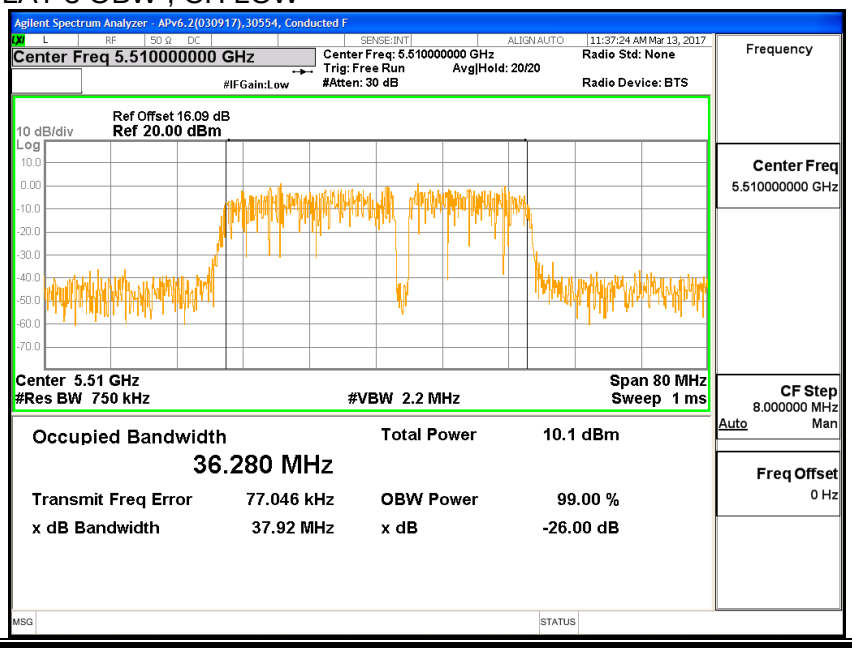
UAT 2 OBW , CH LOW



LAT 3 OBW , CH LOW



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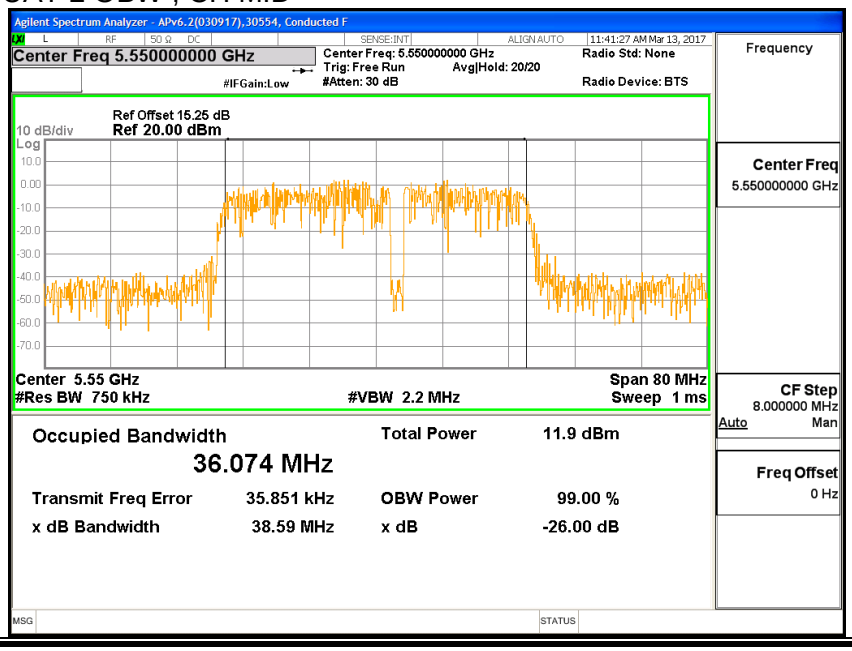
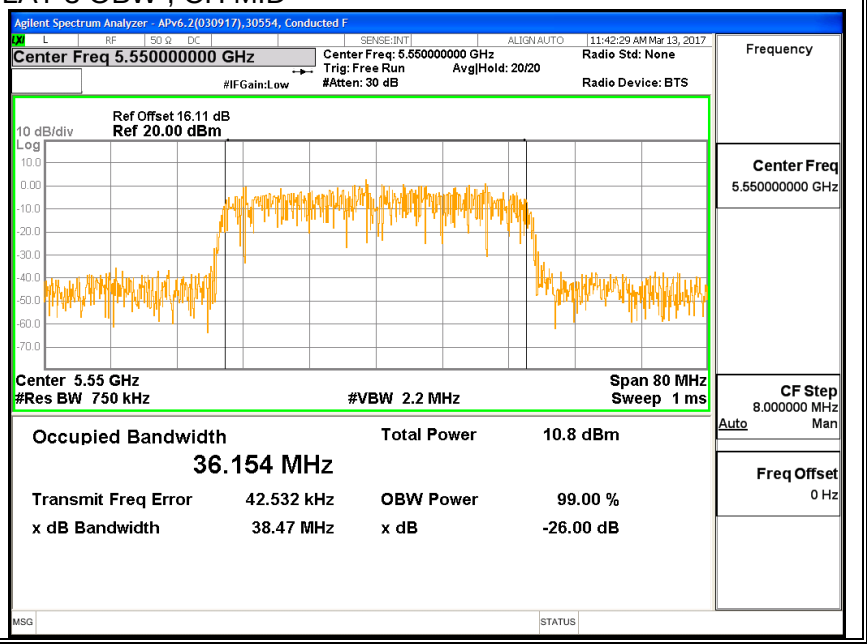
UAT 2 OBW , CH MID



LAT 3 OBW , CH MID



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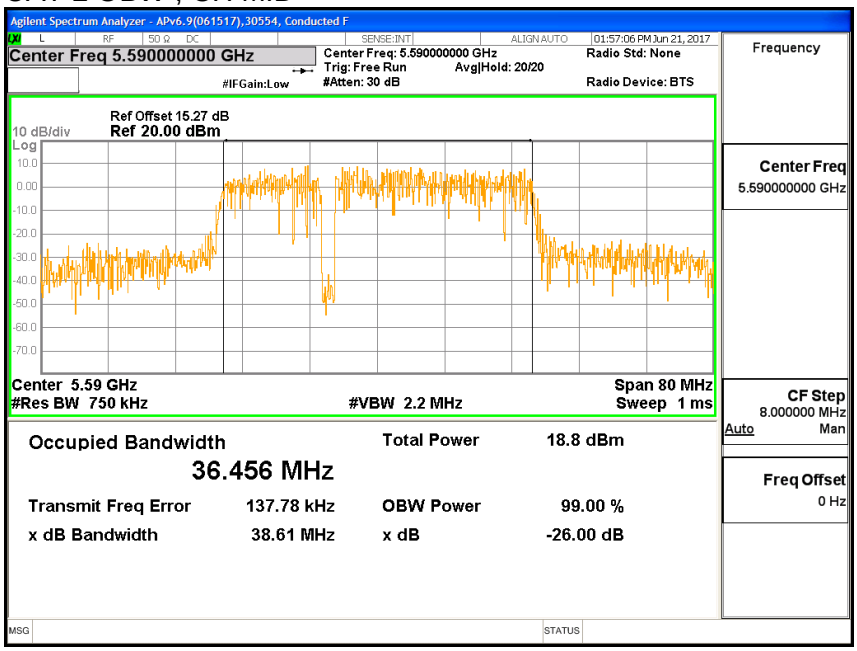
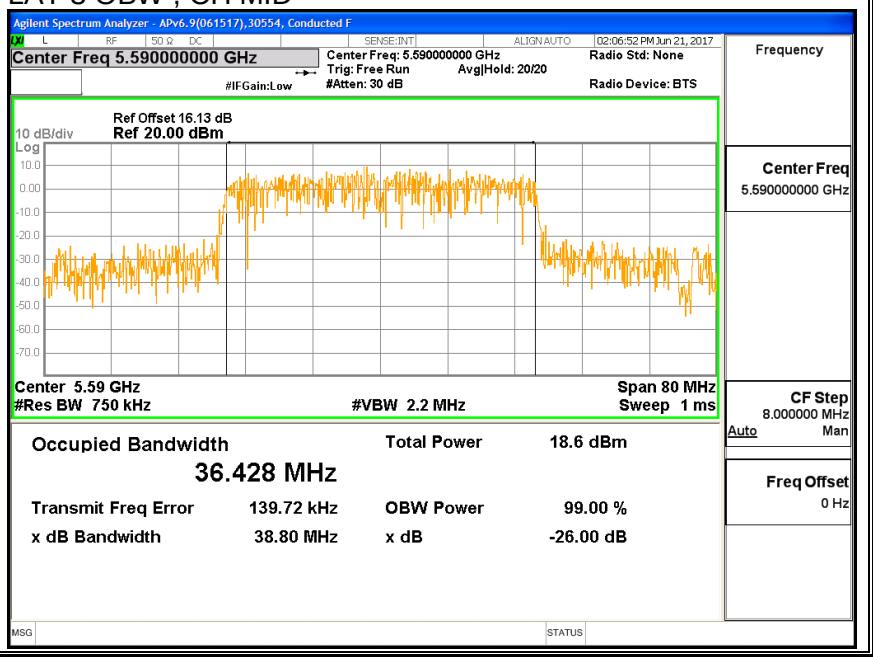
UAT 2 OBW , CH MID



LAT 3 OBW , CH MID



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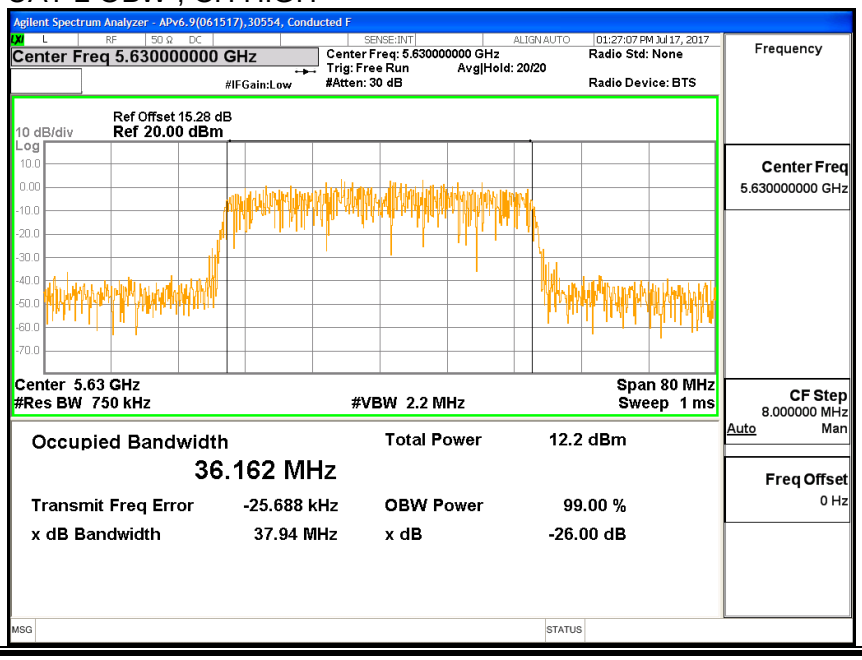
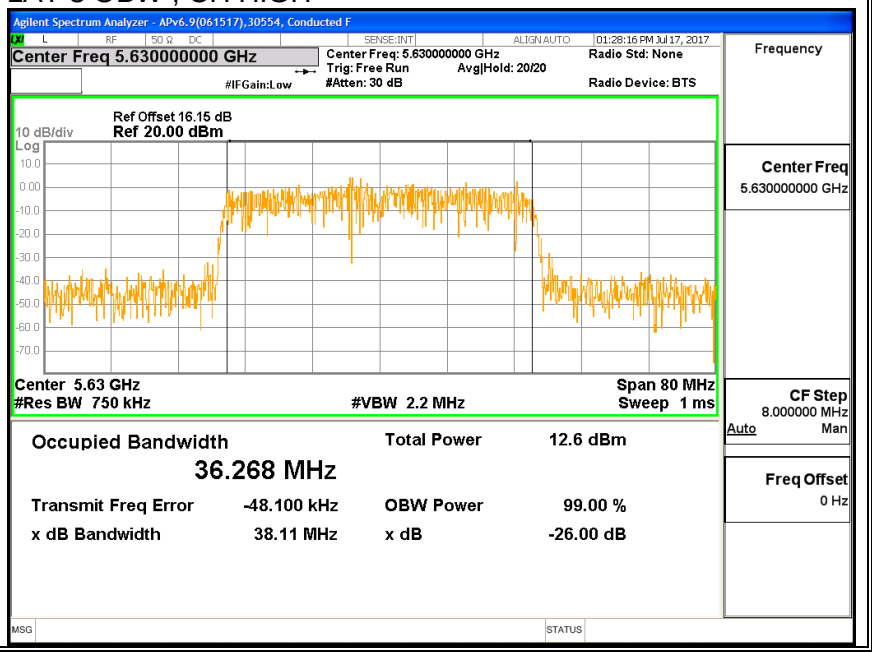
UAT 2 OBW , CH HIGH



LAT 3 OBW , CH HIGH



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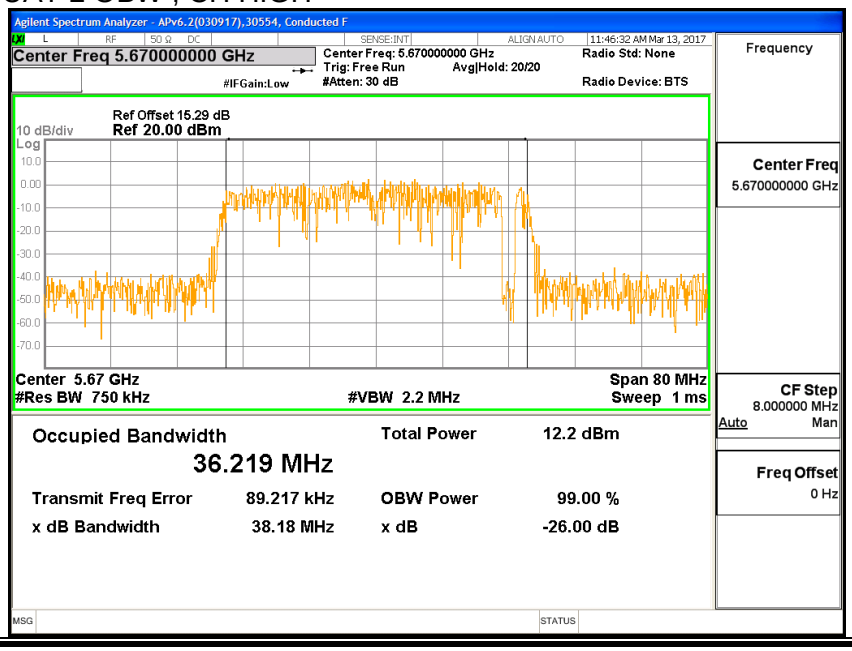
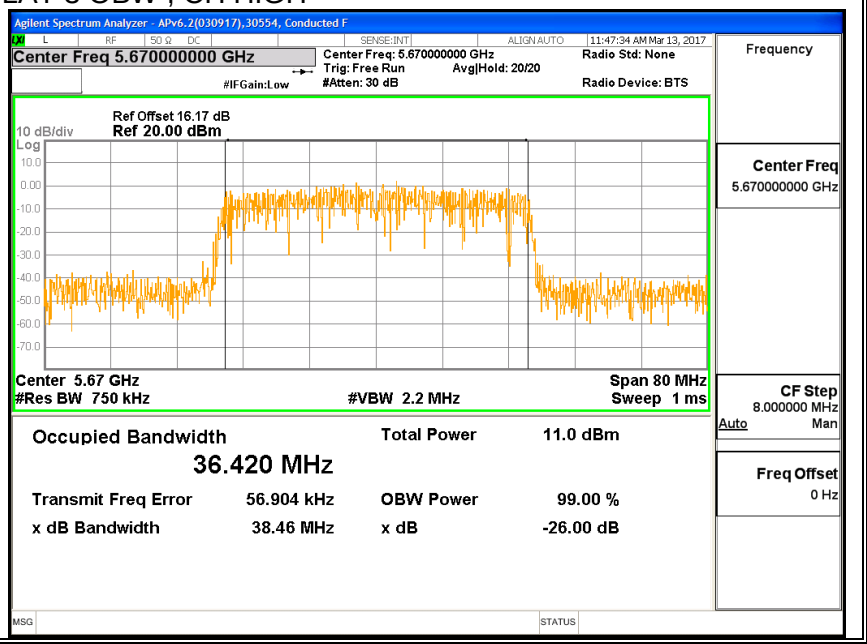
UAT 2 OBW , CH HIGH



LAT 3 OBW , CH HIGH



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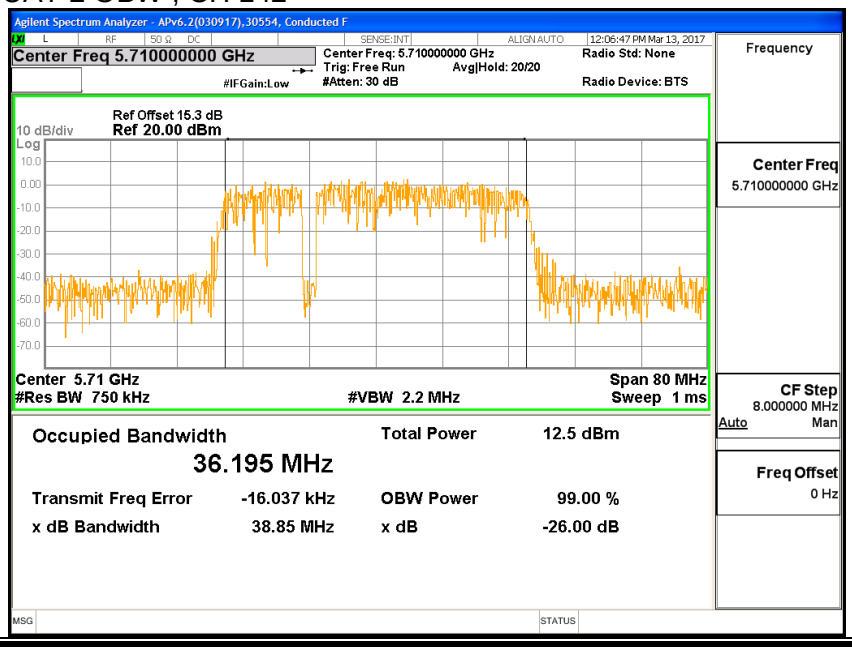
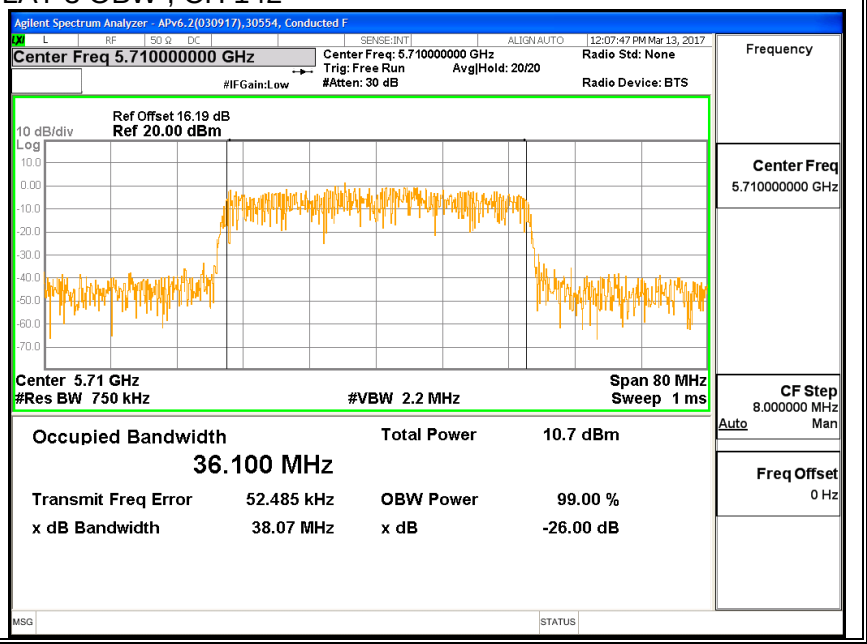
UAT 2 OBW , CH 142



LAT 3 OBW , CH 142



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8.29.3. AVERAGE POWER

ID:	30554	Date:	7/17/2017

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Channel	Frequency (MHz)	UAT 2 Power (dBm)	LAT 3 Power (dBm)	Total Power (dBm)
Low	5510	14.28	14.46	17.38
Mid	5550	18.33	18.45	21.40
Mid	5590	19.39	19.42	22.42
High	5630	18.39	18.47	21.44
High	5670	15.83	15.94	18.90
142	5710	19.30	19.36	22.34

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8.29.4. OUTPUT POWER AND PPSD

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. However, PSD measurement was measured by Spectrum Analyzer and duty cycle factor is required

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

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DIRECTIONAL ANTENNA GAIN

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

UAT 2 Antenna Gain (dBi)	LAT 3 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
-0.75	-0.96	-0.85

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

UAT 2 Antenna Gain (dBi)	LAT 3 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
-0.75	-0.96	2.16

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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	5510	40.20	36.28	-0.85	2.16	24.00	11.00
Mid	5550	40.20	36.074	-0.85	2.16	24.00	11.00
Mid	5590	40.20	36.074	-0.85	2.16	24.00	11.00
High	5630	40.50	36.268	-0.85	2.16	24.00	11.00
High	5670	40.10	36.219	-0.85	2.16	24.00	11.00

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

Output Power Results

Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5510	14.28	14.46	17.38	24.00	-6.62
Mid	5550	18.33	18.45	21.40	24.00	-2.60
Mid	5590	19.39	19.42	22.42	24.00	-1.58
High	5630	18.39	18.47	21.44	24.00	-2.56
High	5670	15.83	15.94	18.90	24.00	-5.10

PSD Results

Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5510	1.263	1.592	4.54	11.00	-6.46
Mid	5550	5.021	5.376	8.31	11.00	-2.69
Mid	5590	5.308	5.192	8.36	11.00	-2.64
High	5630	4.195	4.541	7.48	11.00	-3.52
High	5670	3.318	3.564	6.55	11.00	-4.45

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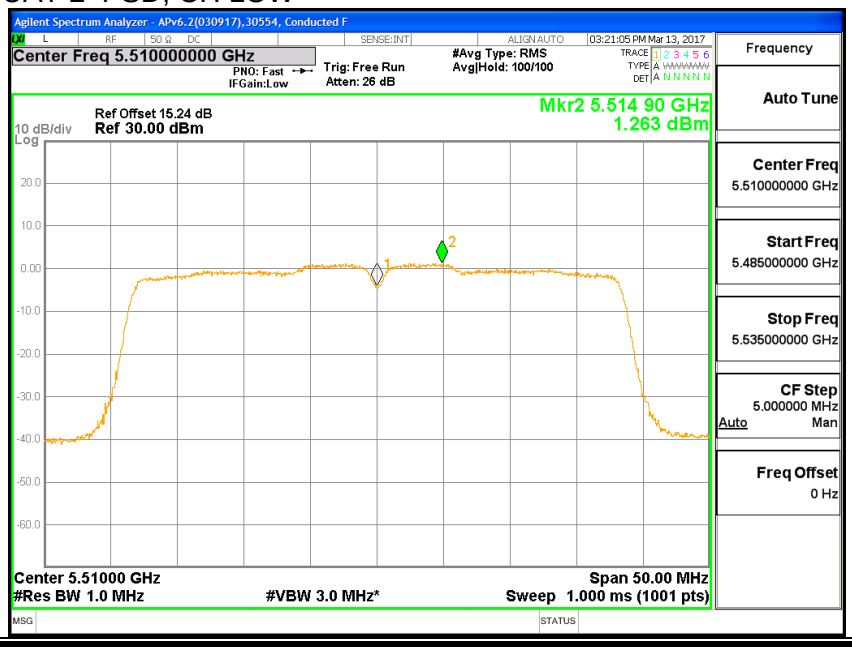
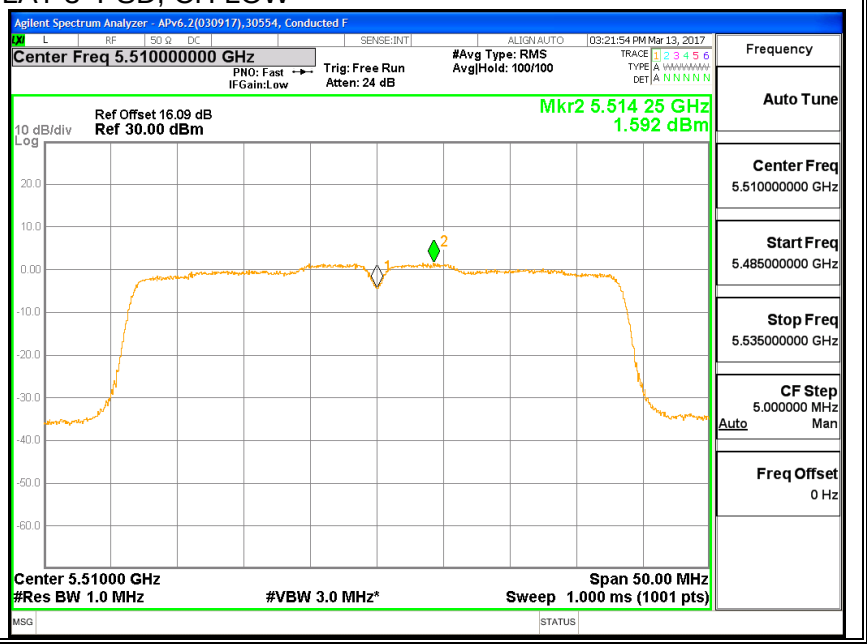
UAT 2 PSD, CH LOW



LAT 3 PSD, CH LOW



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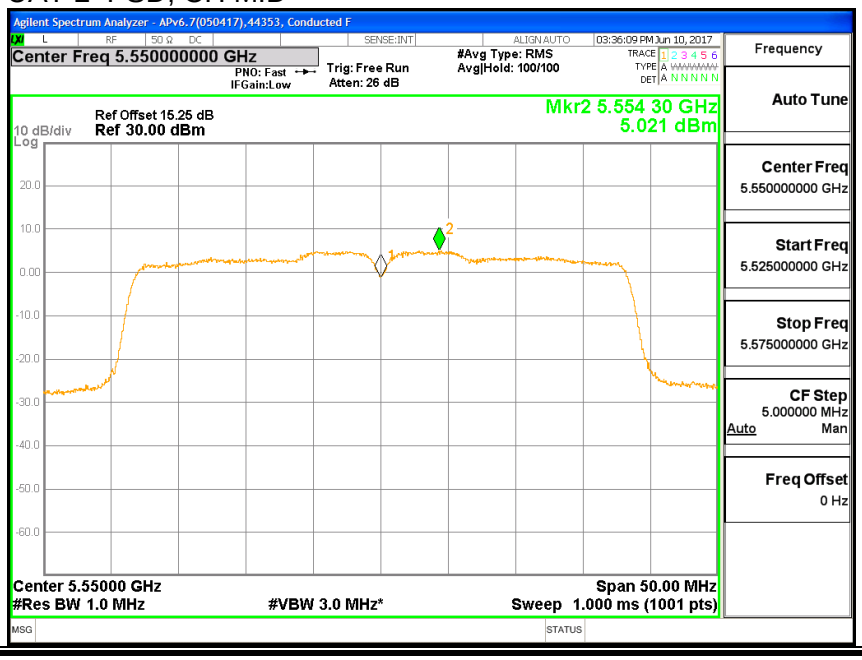
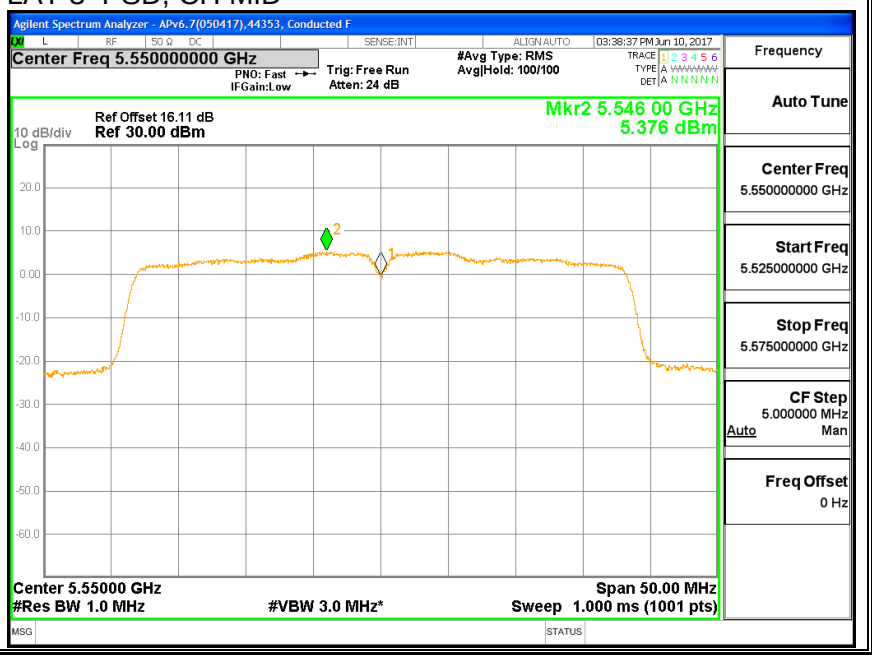
UAT 2 PSD, CH MID



LAT 3 PSD, CH MID



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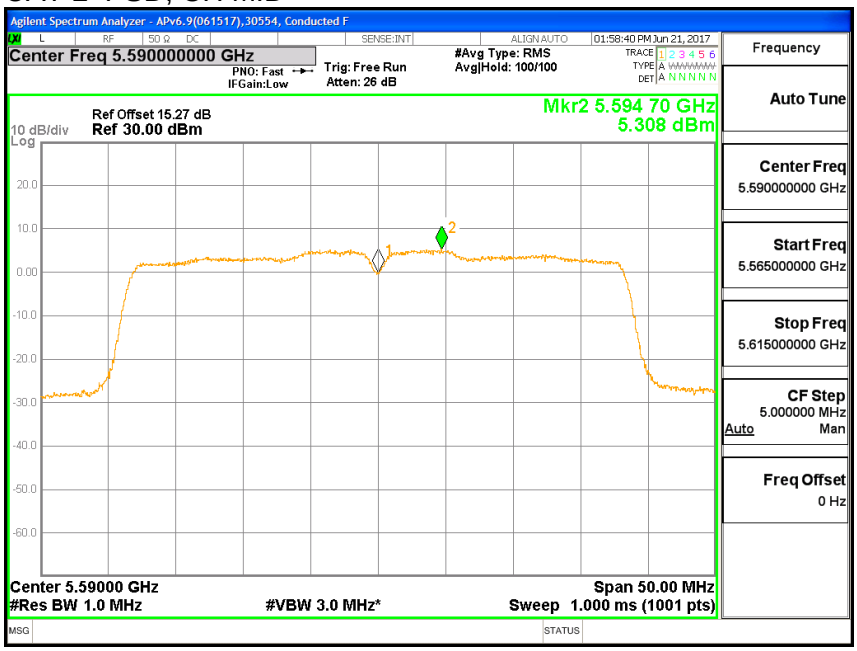
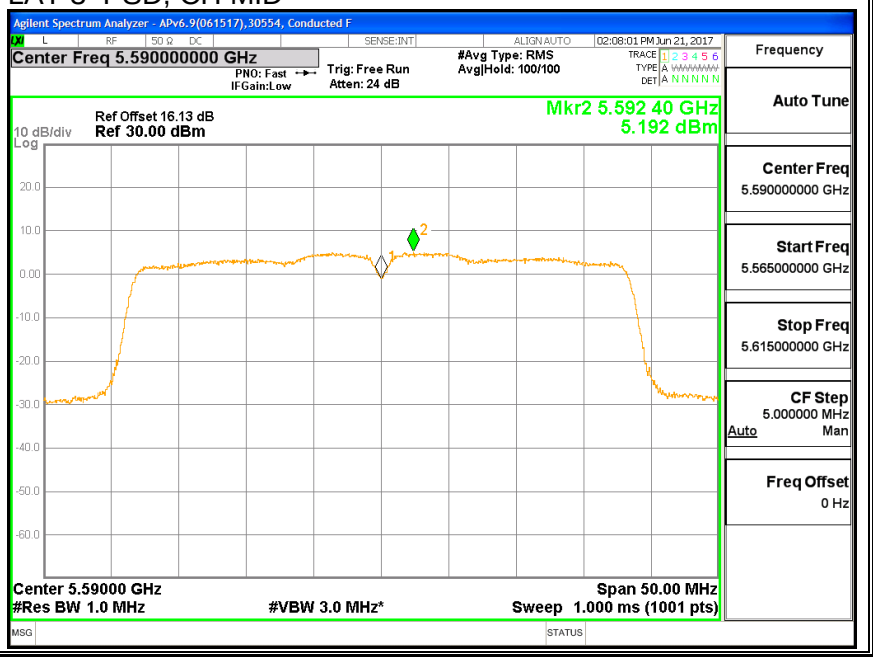
UAT 2 PSD, CH MID



LAT 3 PSD, CH MID



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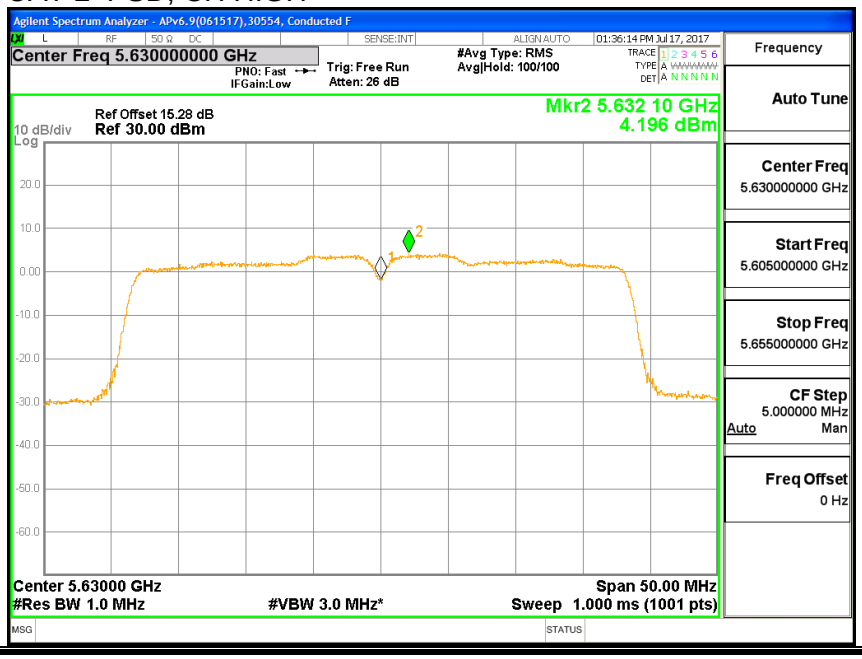
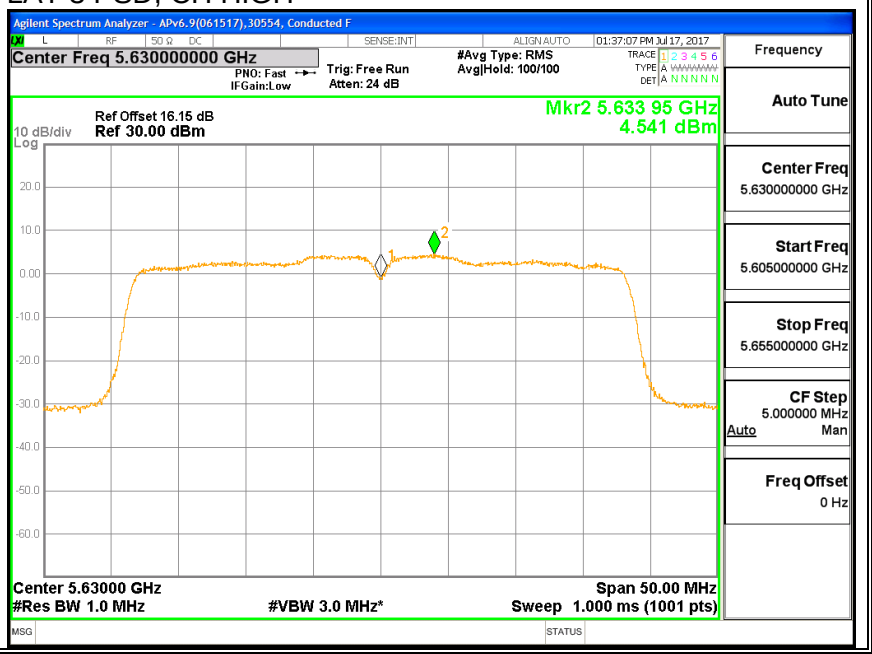
UAT 2 PSD, CH HIGH



LAT 3 PSD, CH HIGH



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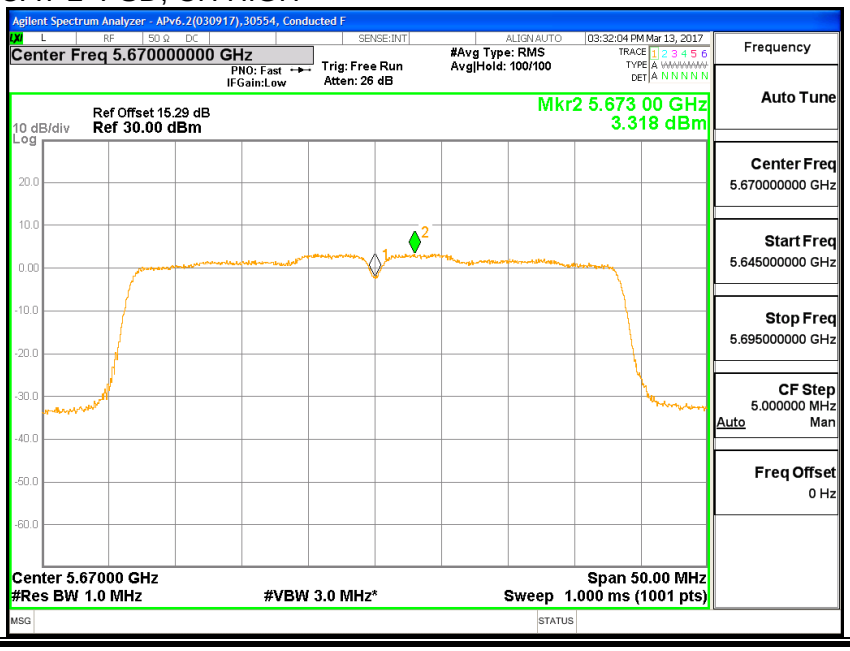
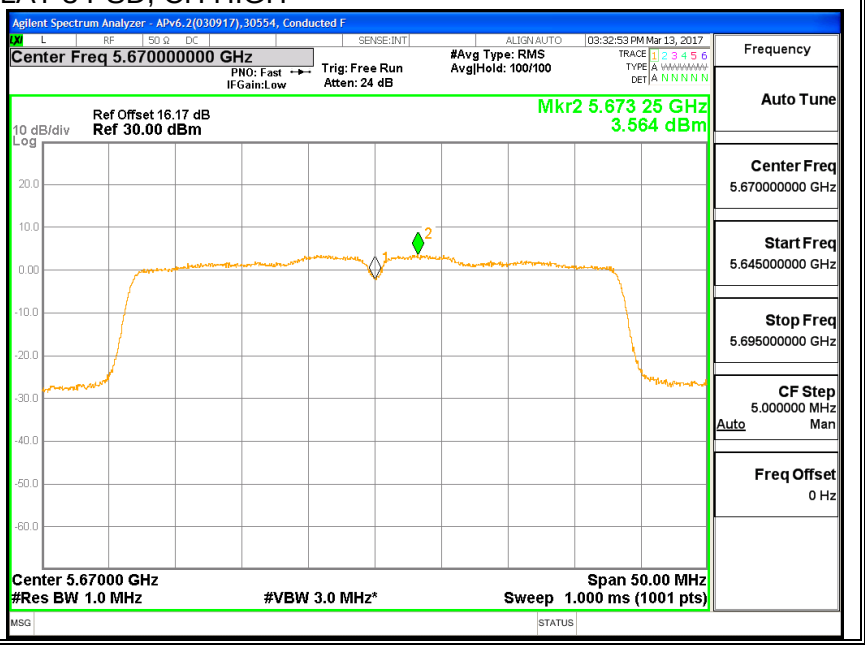
UAT 2 PSD, CH HIGH



LAT 3 PSD, CH HIGH



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8.30. 11ac HT40 2TX CDD MIMO STRADDLE CHANNEL 142

8.30.1. OUTPUT POWER AND PSD

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)
142	5710	35.05	-0.85	2.16	24.00	11.00

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

Output Power Results

Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
142	5710	18.70	18.72	21.82	24.00	-2.18

PSD Results

Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
142	5710	5.88	6.14	9.12	11.00	-1.88

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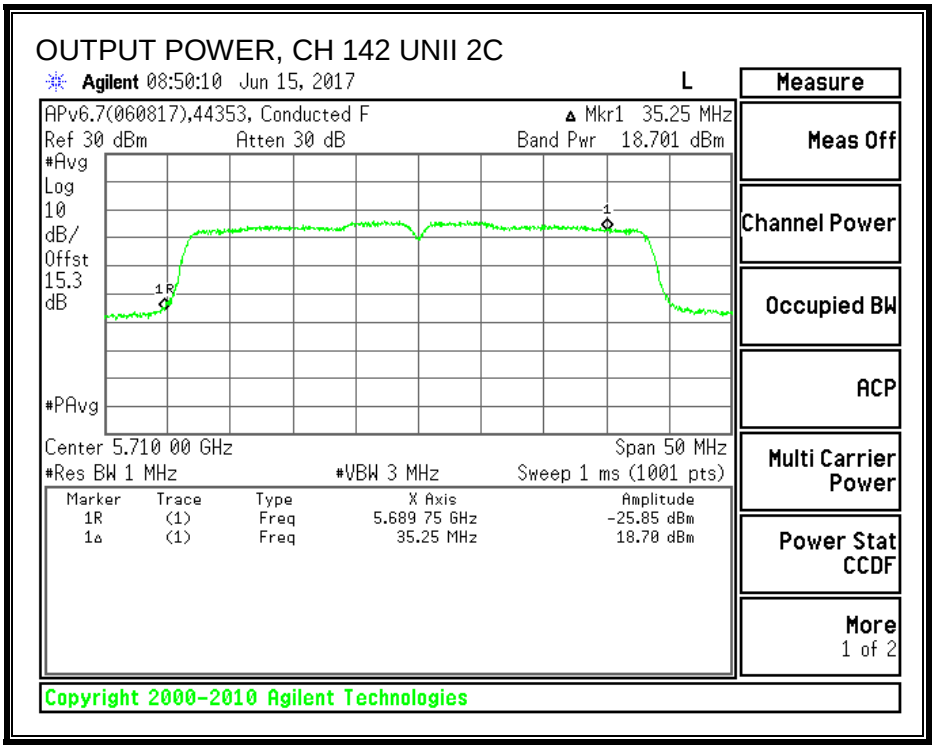
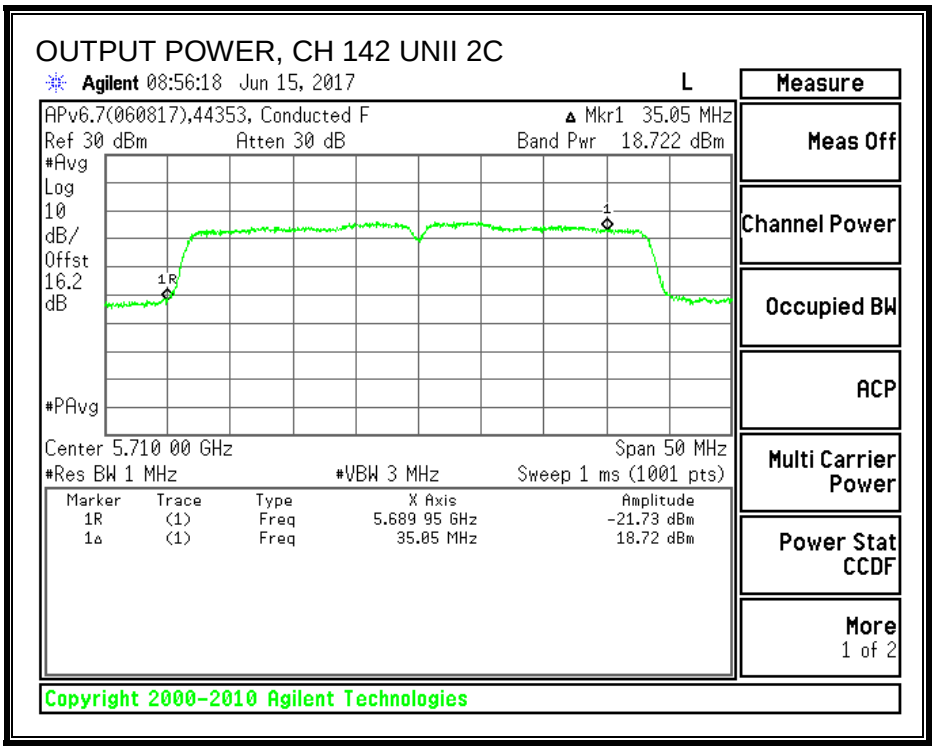
OUTPUT POWER, UAT 2



OUTPUT POWER, LAT 3



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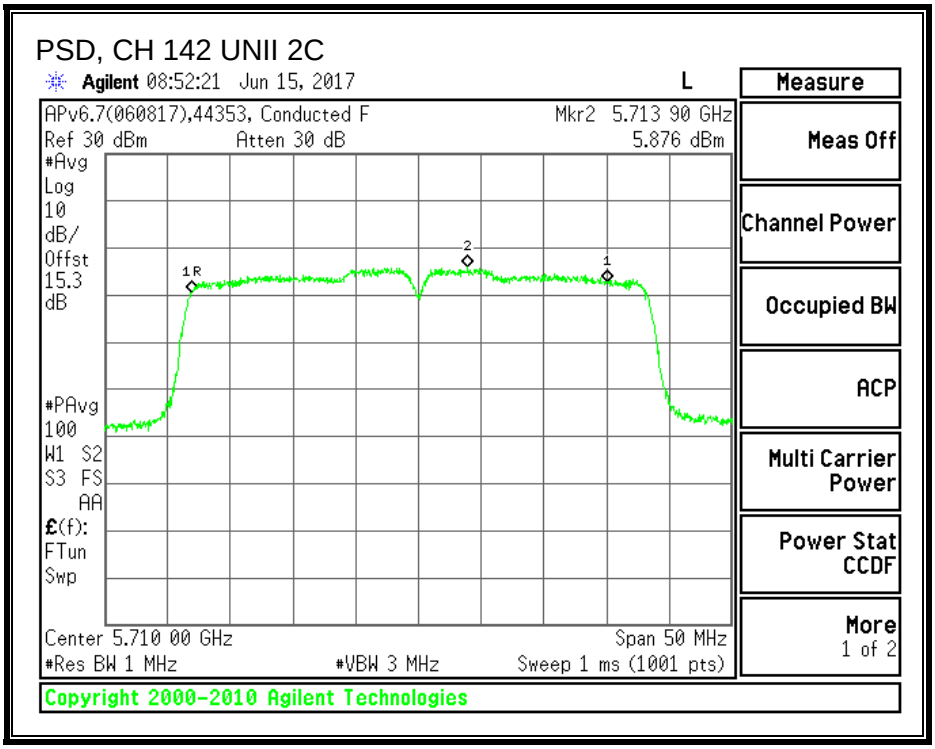
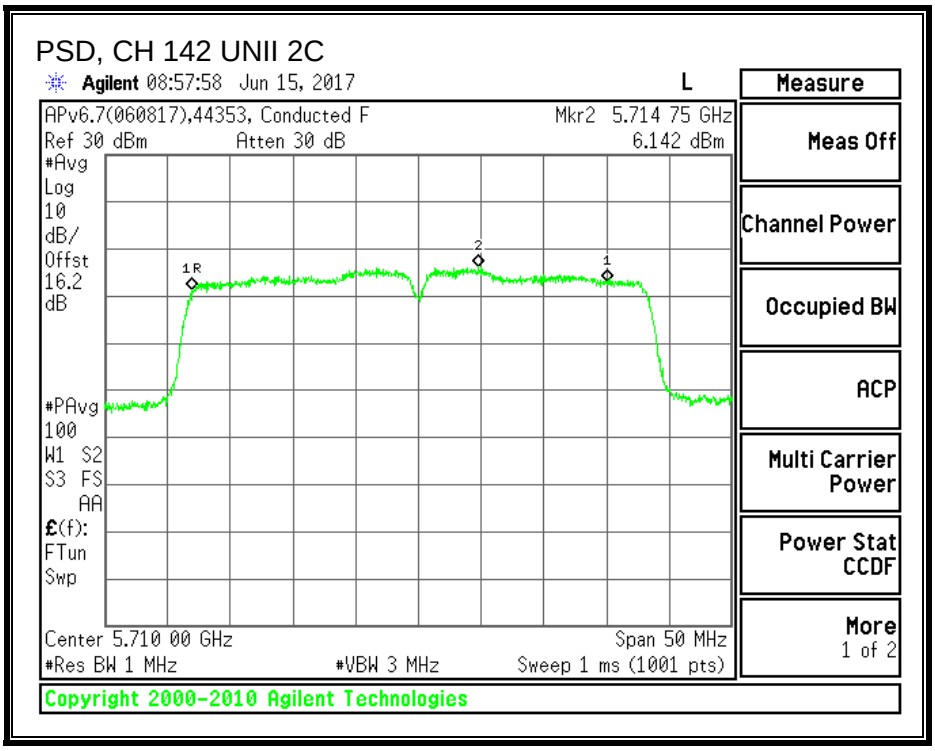
PSD, UAT 2



PSD, LAT 3



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UNII-3 BAND

Antenna Gain and Limit

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain For Power (dBi)	Directional Gain For PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
142	5710	5.05	-0.05	2.92	30.00	30.00

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

Output Power Results

Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
142	5710	7.39	7.60	10.61	30.00	-19.39

PSD Results

Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
142	5710	0.40	0.29	3.46	30.00	-26.54

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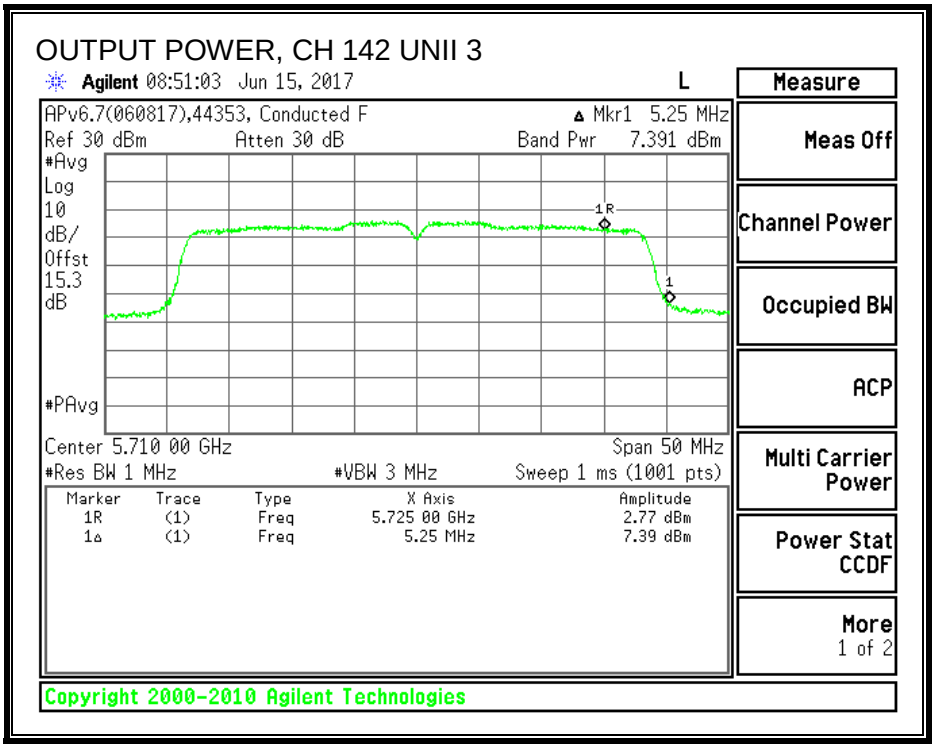
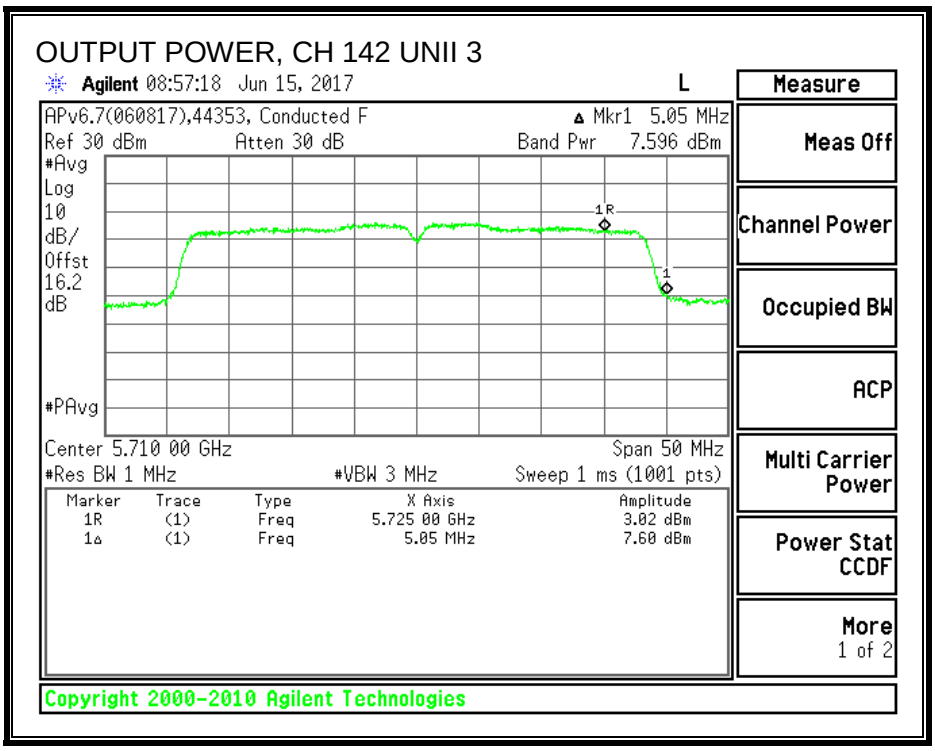
OUTPUT POWER, UAT 2



OUTPUT POWER, LAT 3



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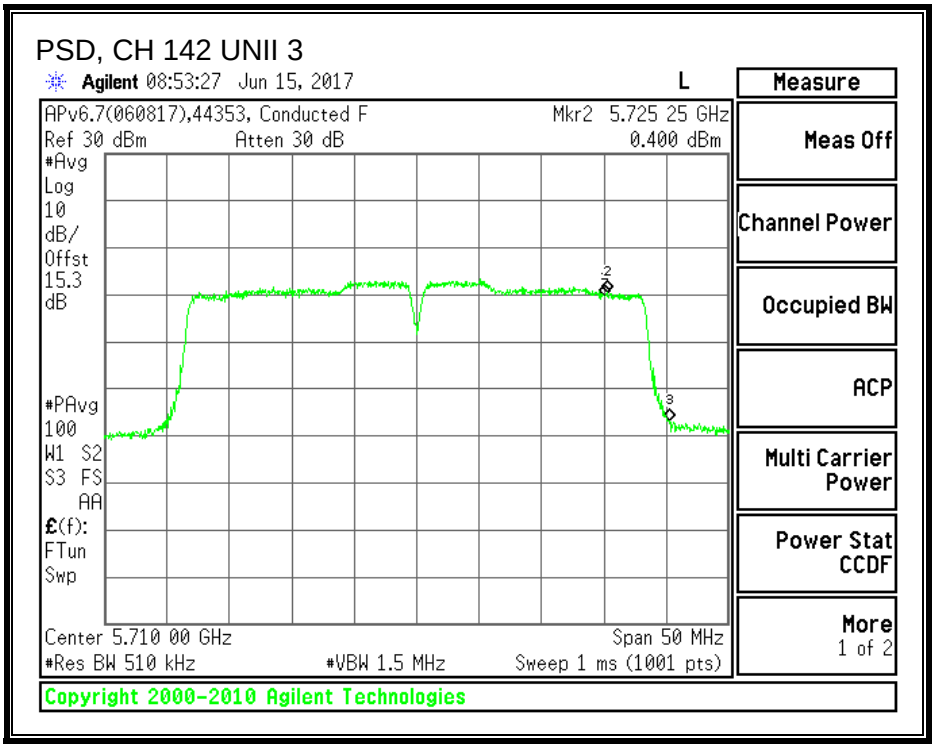
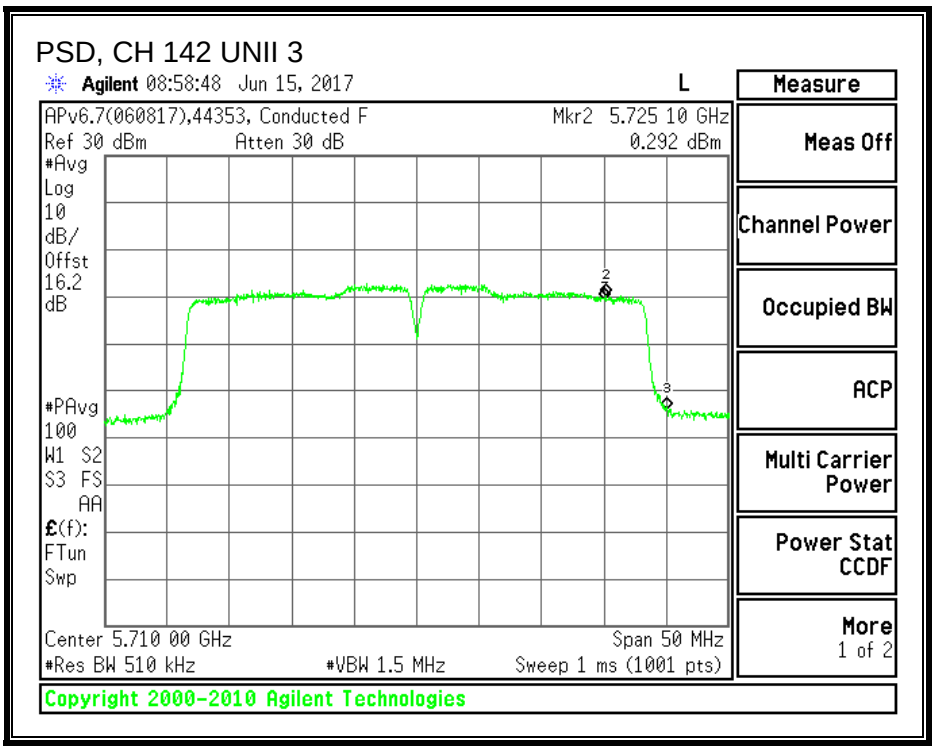
PSD, UAT 2



PSD, LAT 3



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8.30.2. 6 dB BBANDWIDTH

LIMITS

FCC §15.407 (e)

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

RESULTS

Channel	Frequency (MHz)	6 dB BW Ant A (MHz)	6 dB BW Ant B (MHz)
142	5710	3.00	3.30

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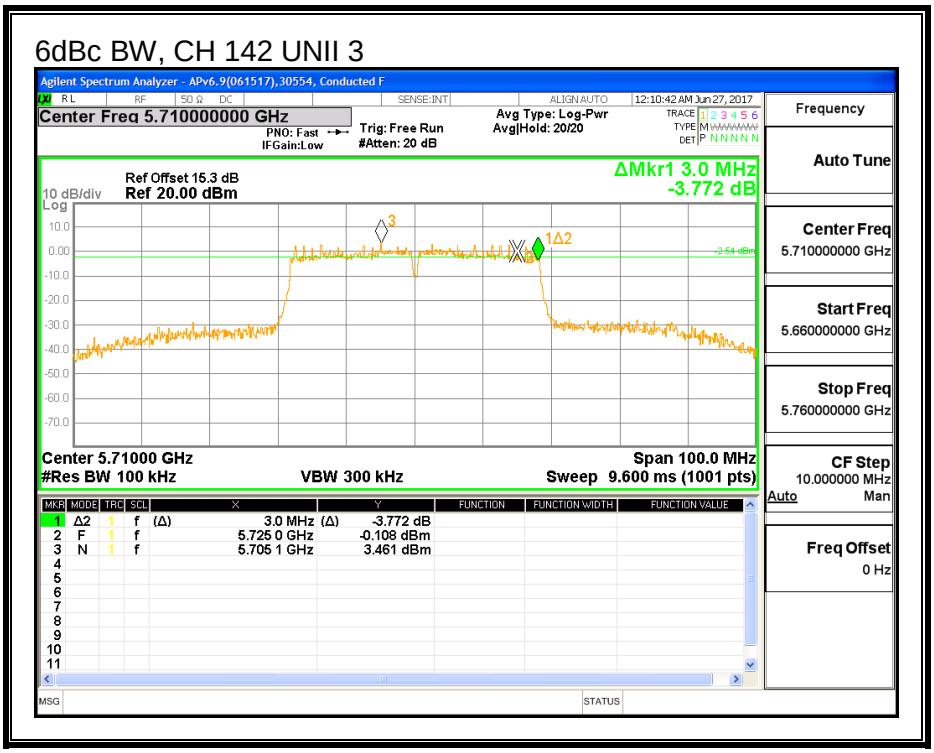
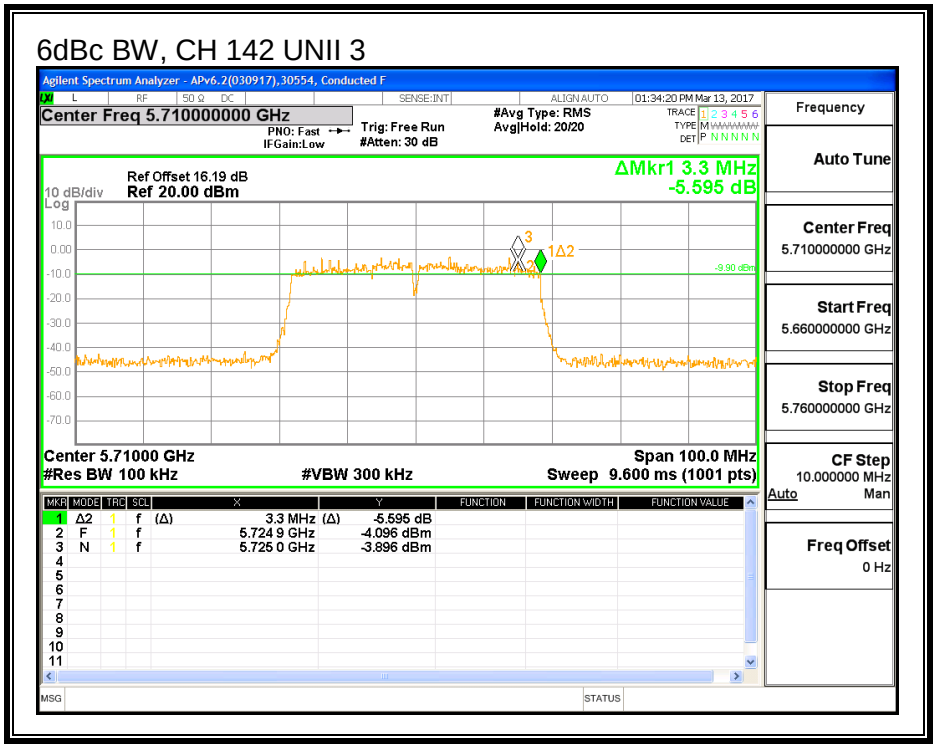
UAT 2



LAT 3



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8.31. 11ac HT80 UAT 2 SISO MODE IN THE 5.6GHz BAND

8.31.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency	26 dB BW UAT 2 (MHz)
Low	5530	82.4
High	5610	82.4
138	5690	82.4

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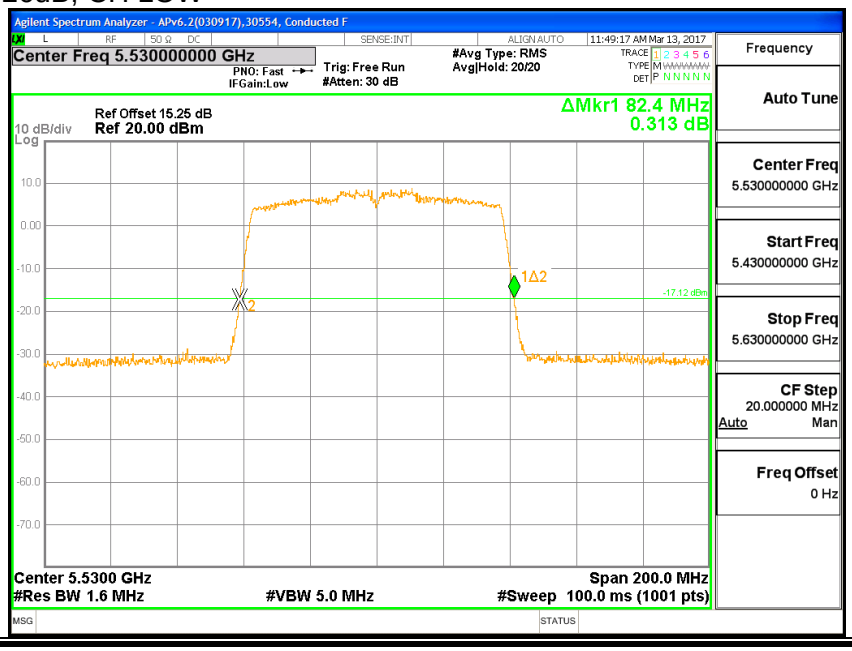
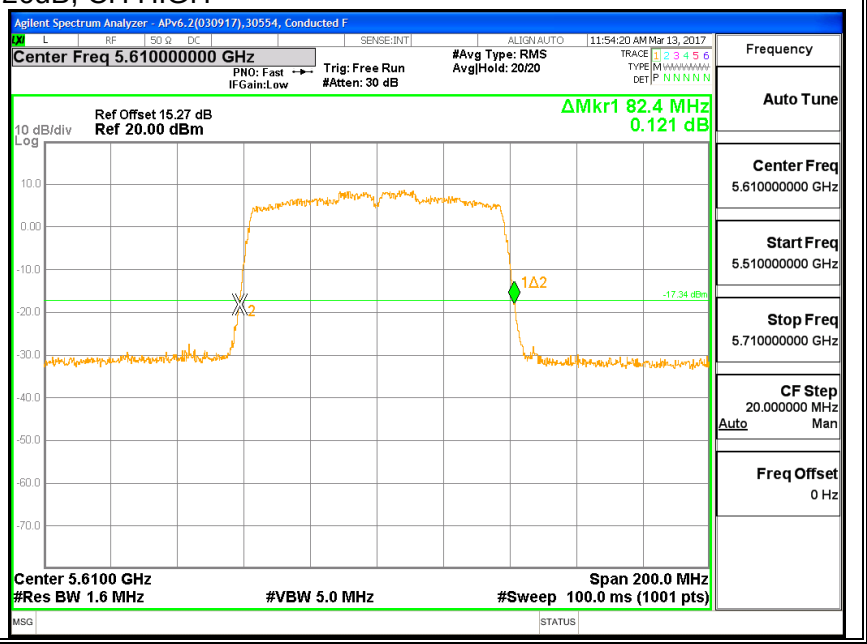
26dB, CH LOW



26dB, CH HIGH



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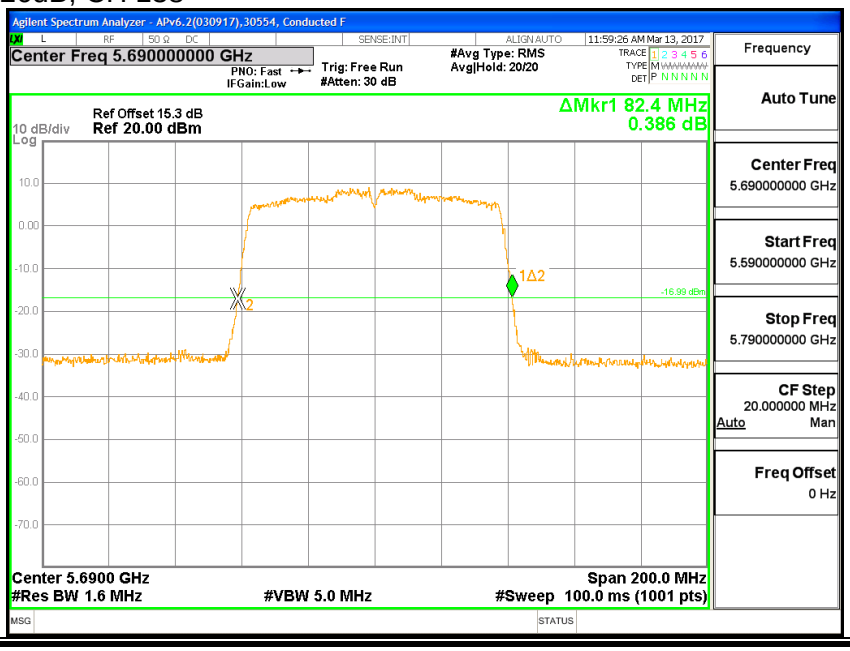
26dB, CH 138



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8.31.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency	99% BW UAT 2 (MHz)
Low	5530	75.553
High	5610	76.078
138	5690	75.674

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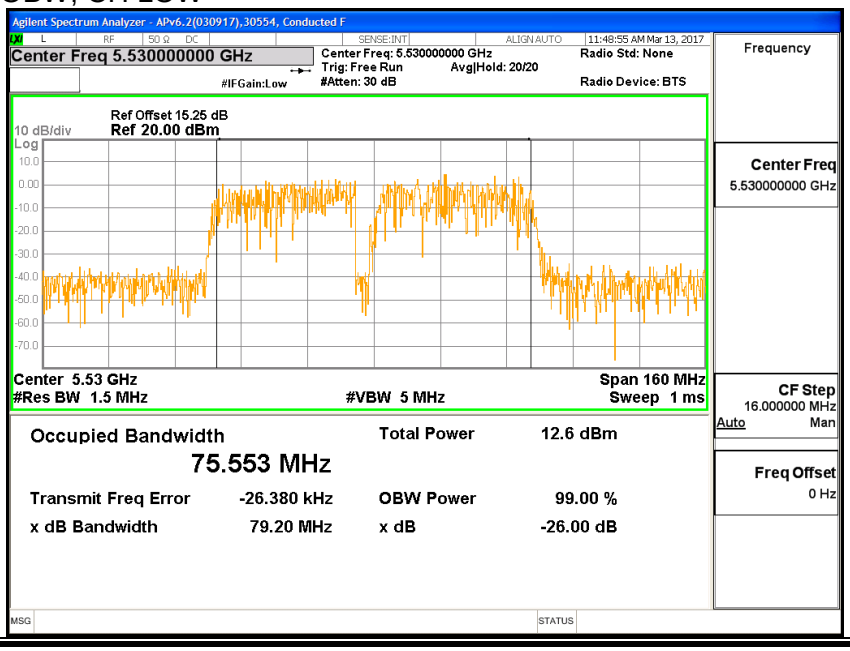
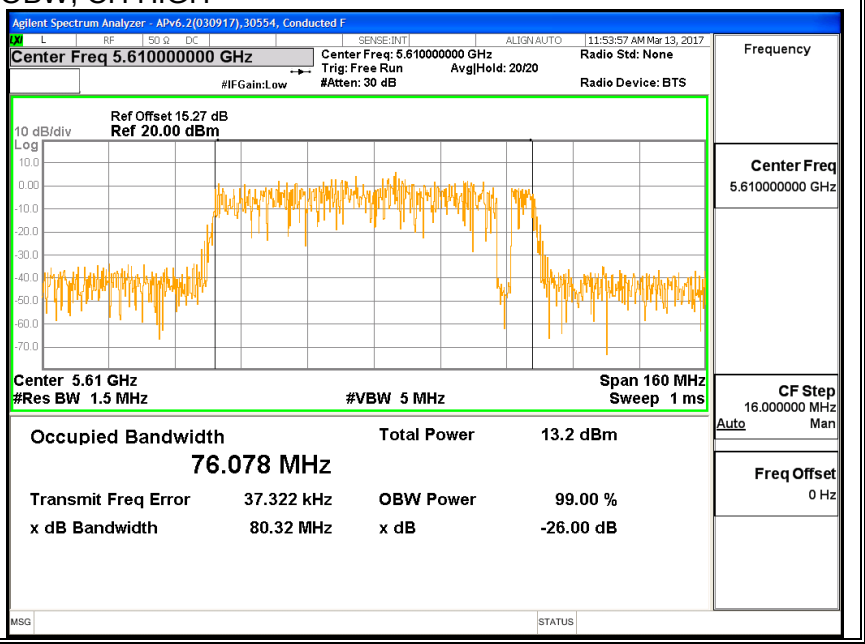
OBW, CH LOW



OBW, CH HIGH



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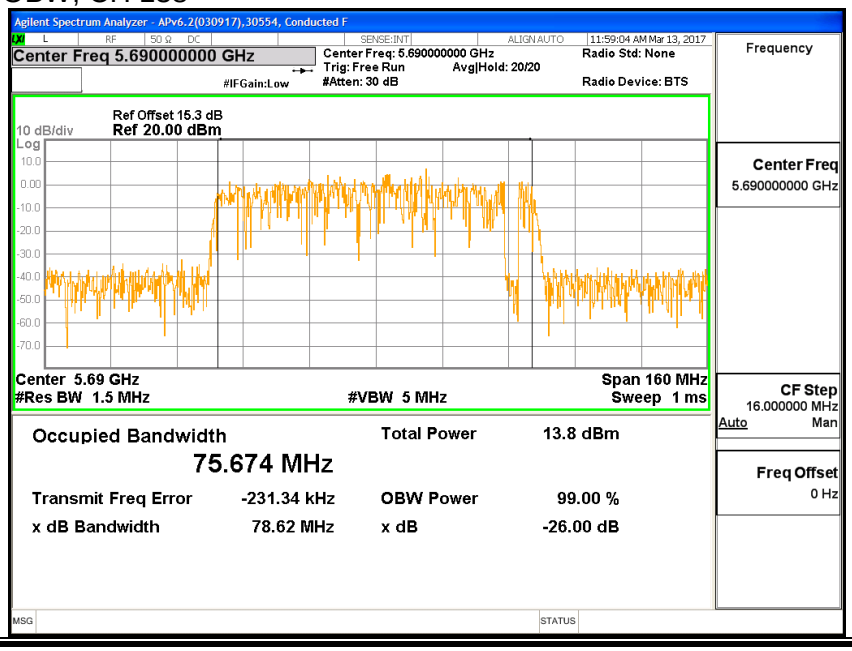
OBW, CH 138



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8.31.3. AVERAGE POWER

ID:	30554	Date:	6/13/2017

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Channel	Frequency	Power UAT 2 (dBm)
Low	5530	14.92
High	5610	18.88
138	5690	18.93

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8.31.4. OUTPUT POWER AND PPSD

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. However, PSD measurement was measured by Spectrum Analyzer and duty cycle 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.

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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	82.40	75.55	-0.75	24.00	11.00
High	5610	82.40	76.08	-0.75	24.00	11.00

Duty Cycle CF (dB)	0.20	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5530	14.92	14.92	24.00	-9.08
High	5610	18.88	18.88	24.00	-5.12

PSD Results

Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5530	-1.240	-1.040	11.00	-12.04
High	5610	4.646	4.846	11.00	-6.15

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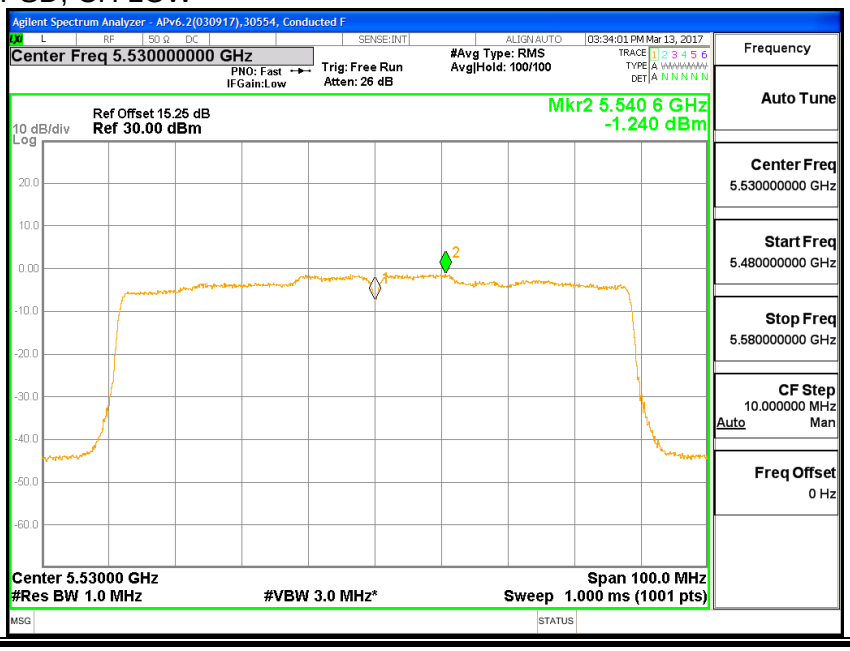
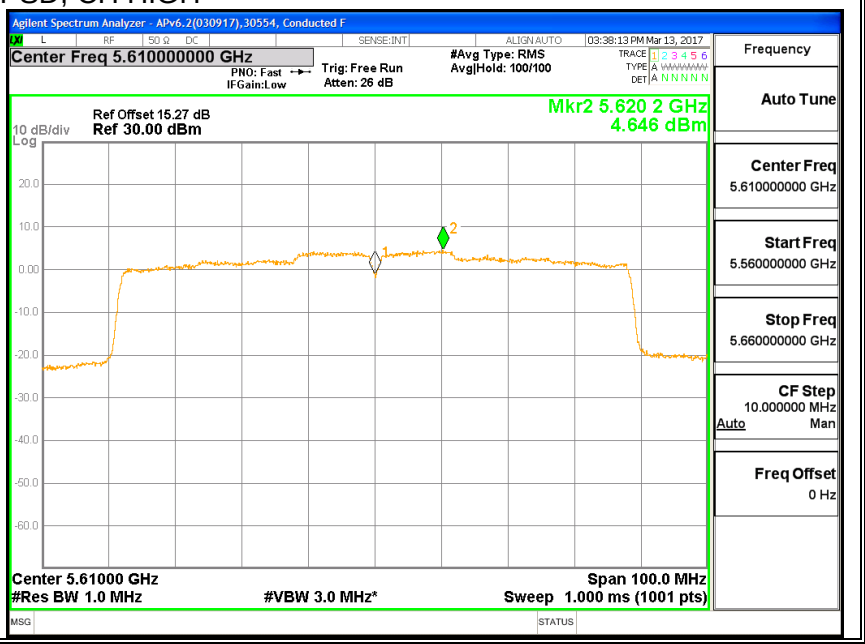
PSD, CH LOW



PSD, CH HIGH



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8.31.5. STRADDLE CHANNEL 138 RESULTS

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	76.20	-0.75	-0.75	24.00	11.00

Duty Cycle CF (dB)	0.20	Included in Calculations of Corr'd Power & PSD

Output Power Results

Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	18.62	18.82	24.00	-5.18

PSD Results

Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	2.62	2.82	11.00	-8.18

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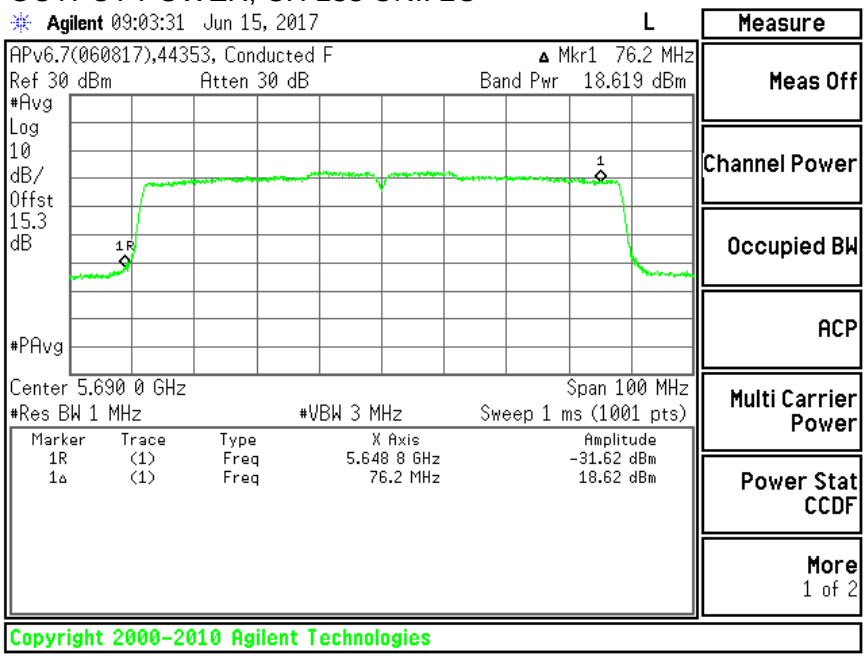
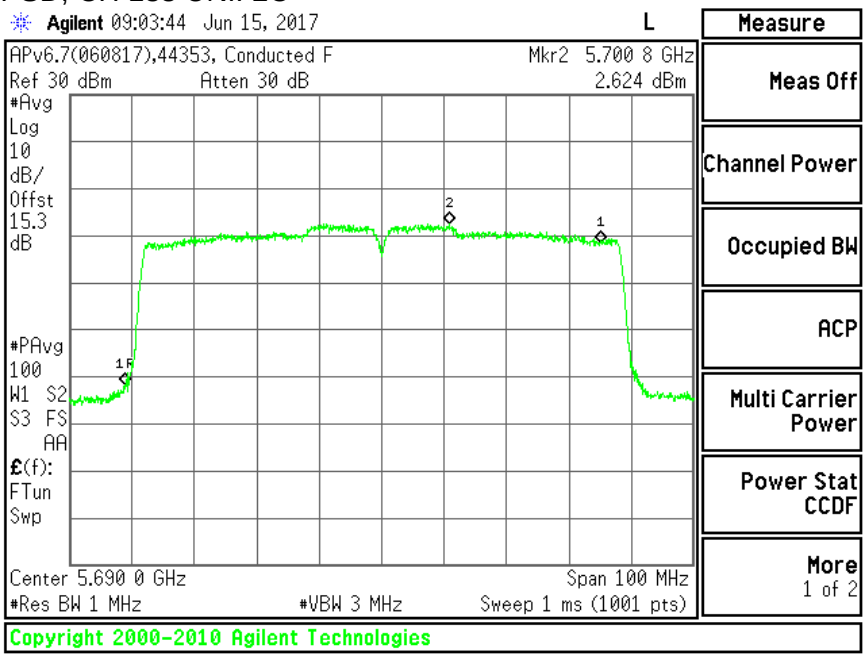
OUTPUT POWER, CH 138 UNII 2C



PSD, CH 138 UNII 2C



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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	6.20	0.68	30.00	30.00

Duty Cycle CF (dB)	0.20	Included in Calculations of Corr'd Power & PSD

Output Power Results

Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	3.70	3.90	30.00	-26.10

PSD Results

Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	-3.02	-2.82	30.00	-32.82

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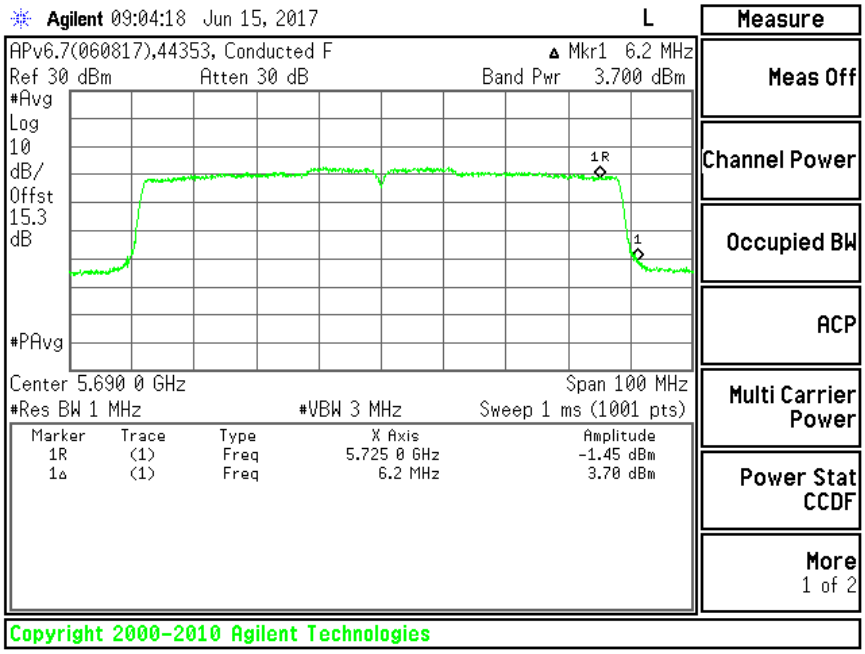
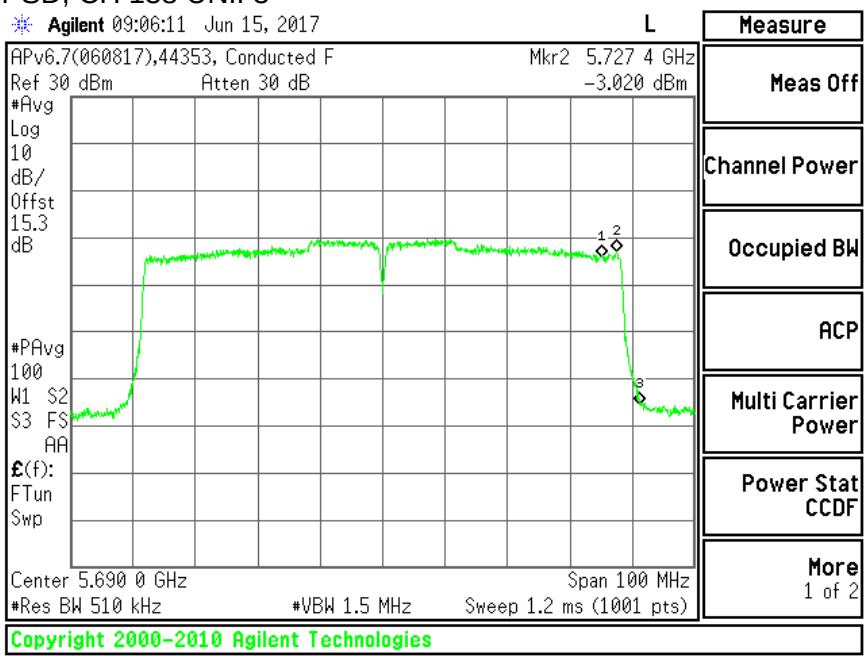
OUTPUT POWER, CH 138 UNII 3



PSD, CH 138 UNII 3



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8.31.6. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

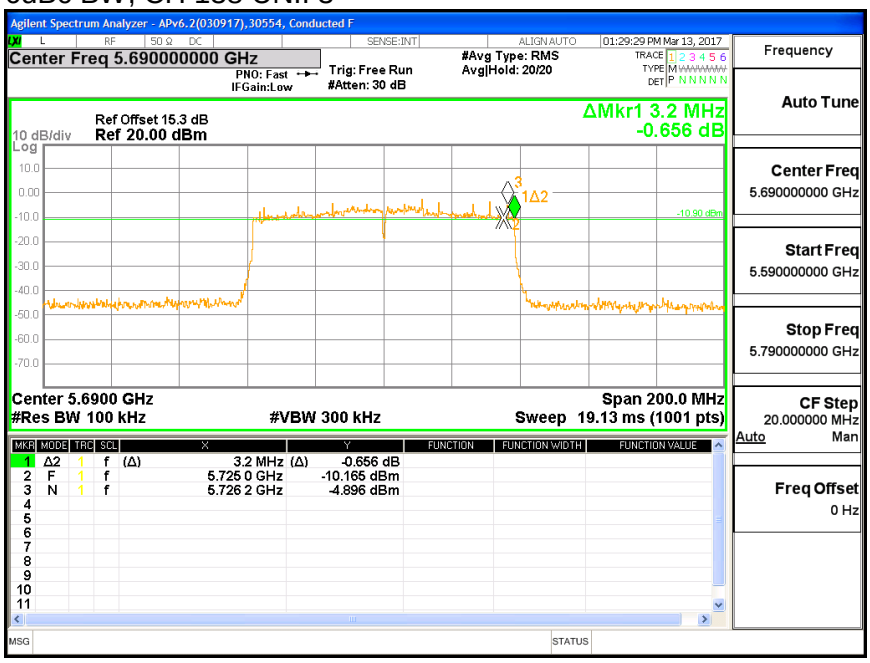
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)
138	5690	3.20

6 dB BANDWIDTH

6dBc BW, CH 138 UNII 3



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8.32. 11ac HT80 LAT 3 SISO MODE IN THE 5.6GHz BAND

8.32.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency	26 dB BW LAT 3 (MHz)
Low	5530	82.6
High	5610	82.8
138	5690	82.2

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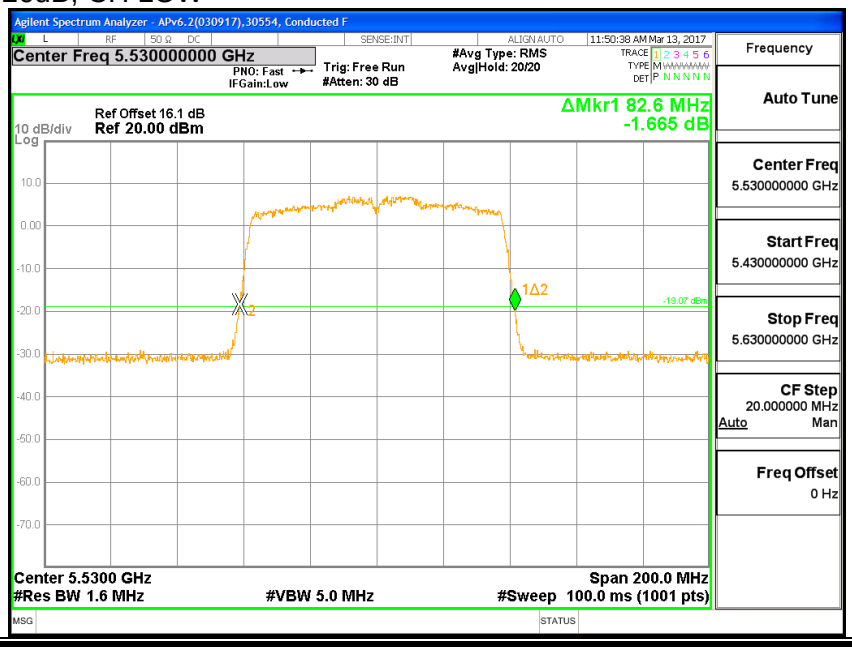
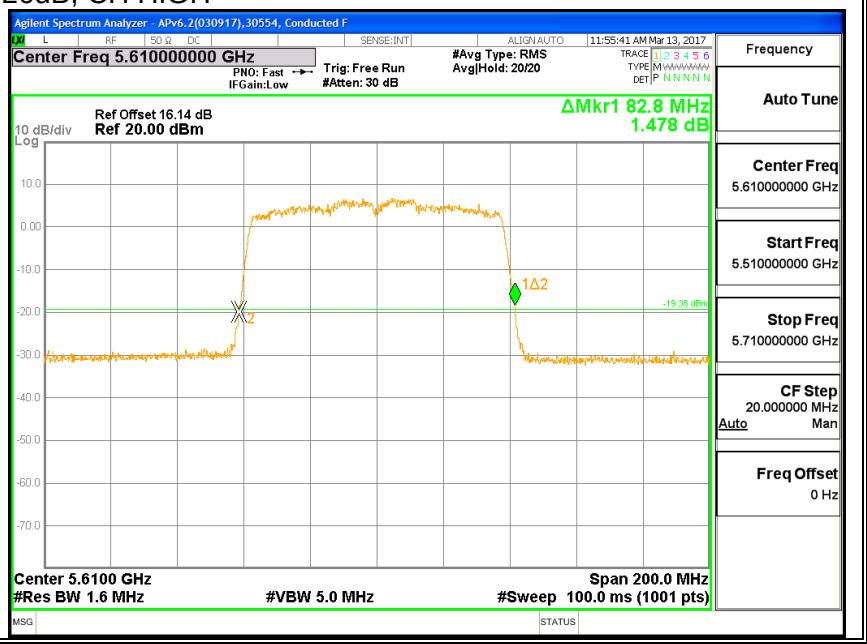
26dB, CH LOW



26dB, CH HIGH



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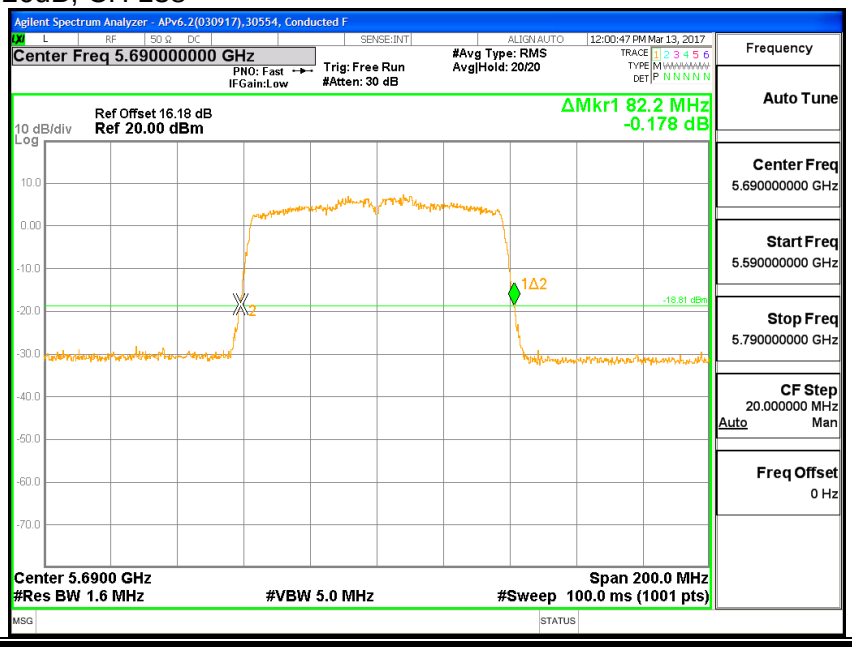
26dB, CH 138



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8.32.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency	99% BW LAT 3 (MHz)
Low	5530	75.653
High	5610	75.941
138	5690	76.174

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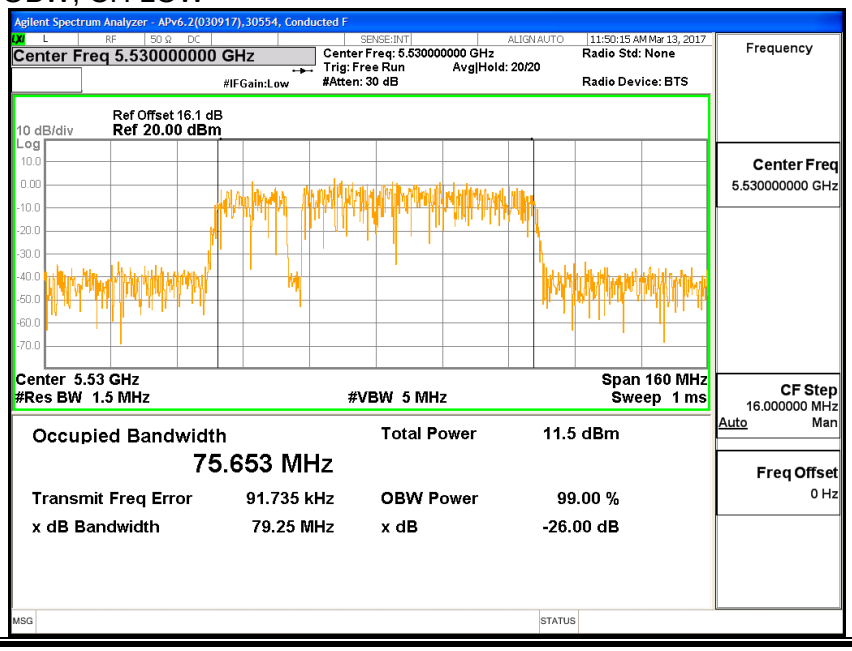
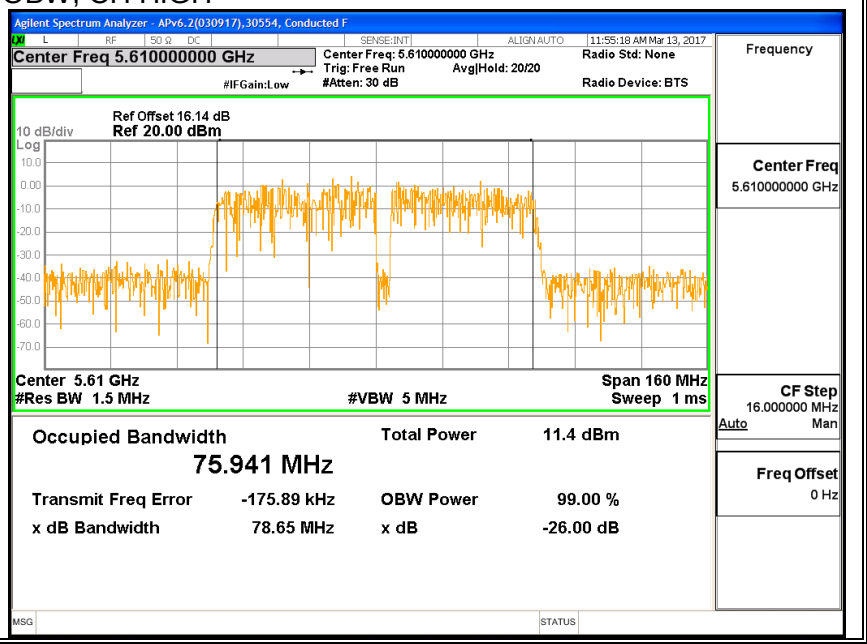
OBW, CH LOW



OBW, CH HIGH



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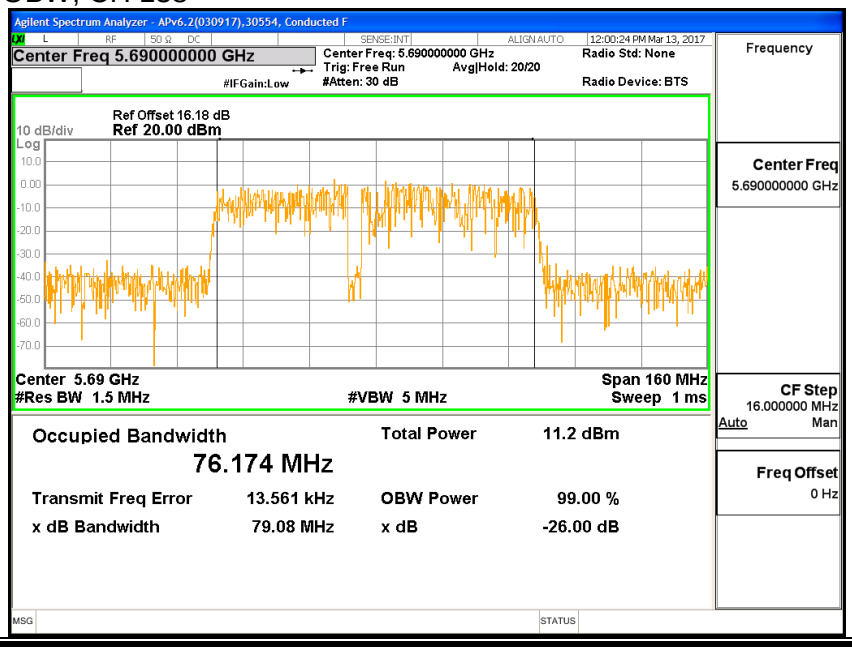
OBW, CH 138



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8.32.3. AVERAGE POWER

ID:	30554	Date:	6/13/2017

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Channel	Frequency	Power LAT 3 (dBm)
Low	5530	14.85
High	5610	18.78
138	5690	18.87

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8.32.4. OUTPUT POWER AND PPSD

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. However, PSD measurement was measured by Spectrum Analyzer and duty cycle 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.

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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	82.60	75.65	-0.96	24.00	11.00
Mid	5610	82.80	75.94	-0.96	24.00	11.00

Duty Cycle CF (dB)	0.20	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5530	14.85	14.85	24.00	-9.15
Mid	5610	18.78	18.78	24.00	-5.22

PSD Results

Channel	Frequency (MHz)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5530	-2.129	-1.93	11.00	-12.93
Mid	5610	3.791	3.99	11.00	-7.01

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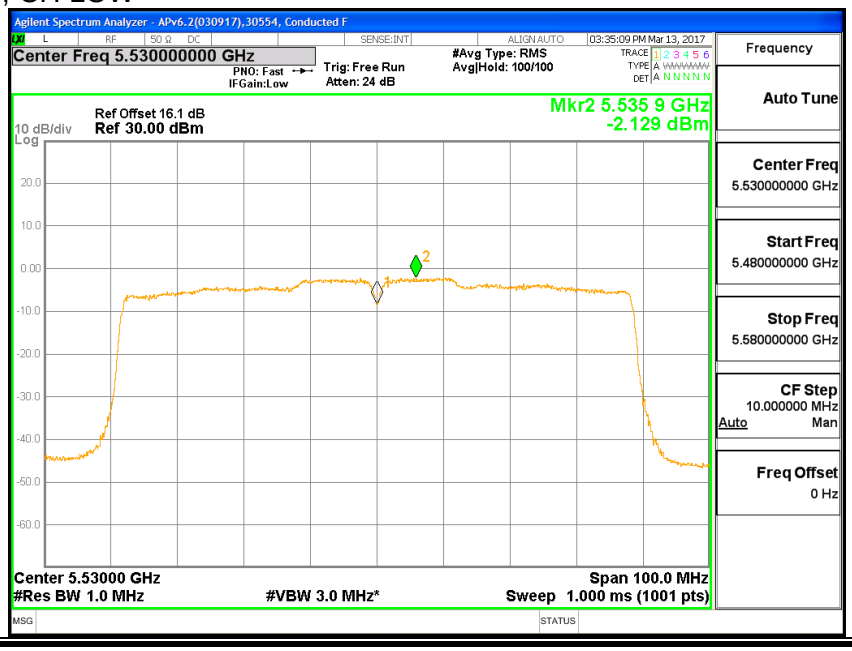
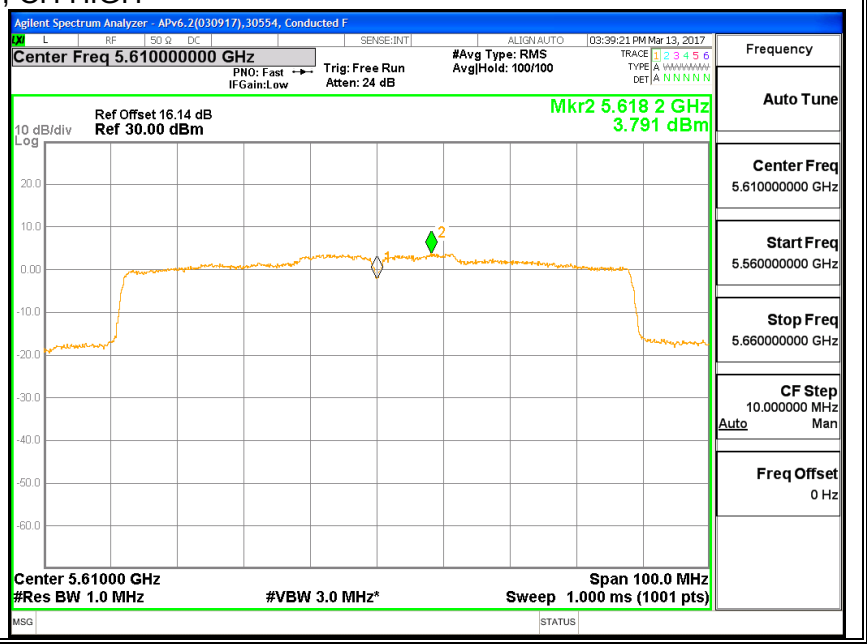
, CH LOW



, CH HIGH



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8.32.5. STRADDLE CHANNEL 138 RESULTS

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	76.1	-0.96	-0.96	24.00	11.00

Duty Cycle CF (dB)	0.20	Included in Calculations of Corr'd Power & PSD

Output Power Results

Channel	Frequency (MHz)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	18.34	18.54	24.00	-5.46

PSD Results

Channel	Frequency (MHz)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	2.16	2.36	11.00	-8.64

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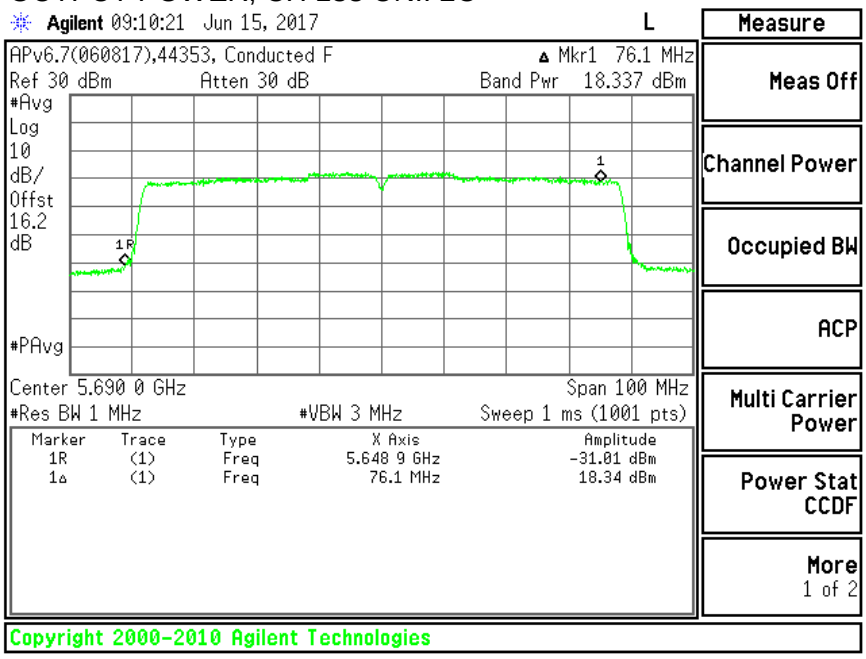
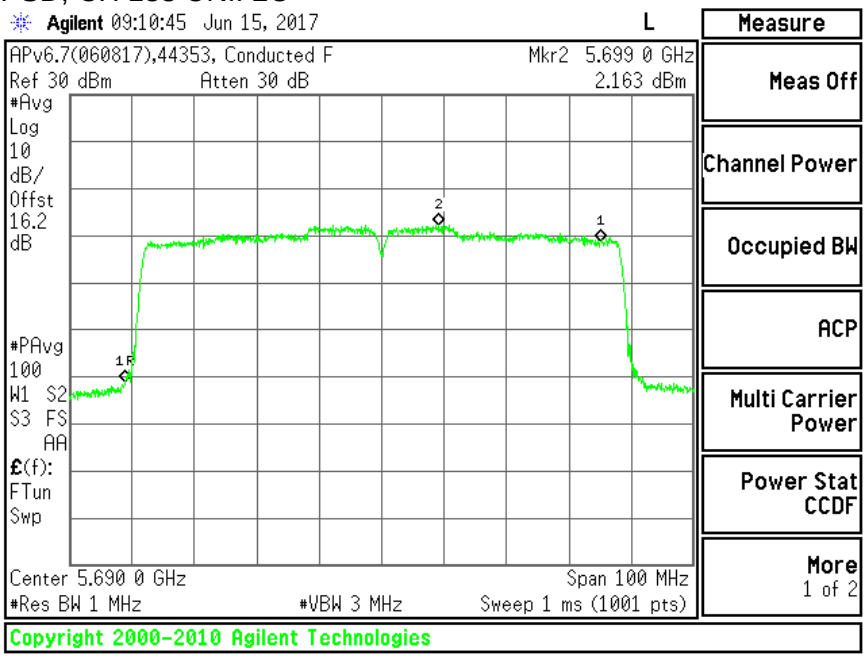
OUTPUT POWER, CH 138 UNII 2C



PSD, CH 138 UNII 2C



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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	6.10	-0.93	30.00	30.00

Duty Cycle CF (dB)	0.20	Included in Calculations of Corr'd Power & PSD

Output Power Results

Channel	Frequency (MHz)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	3.65	3.85	30.00	-26.15

PSD Results

Channel	Frequency (MHz)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	-3.68	-3.48	30.00	-33.48

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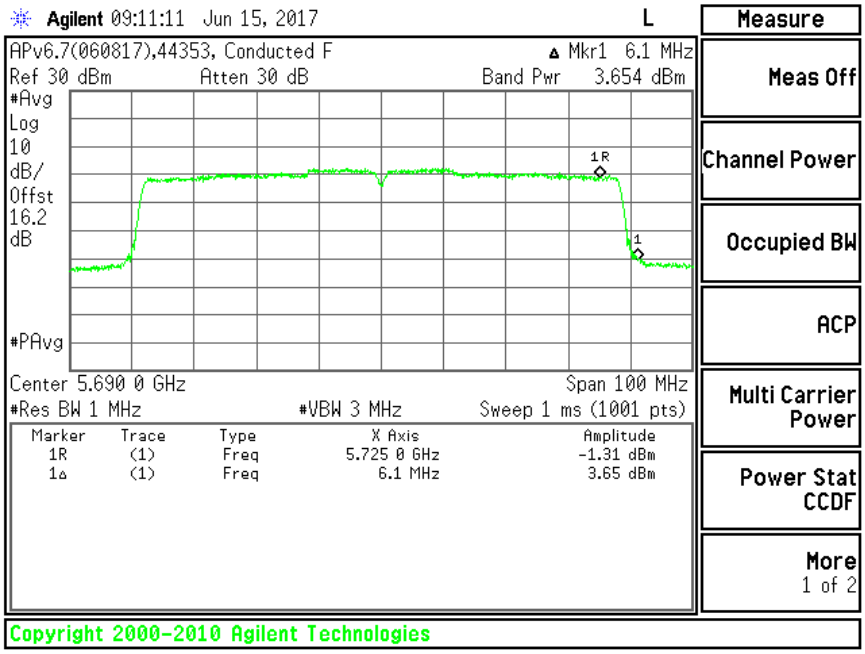
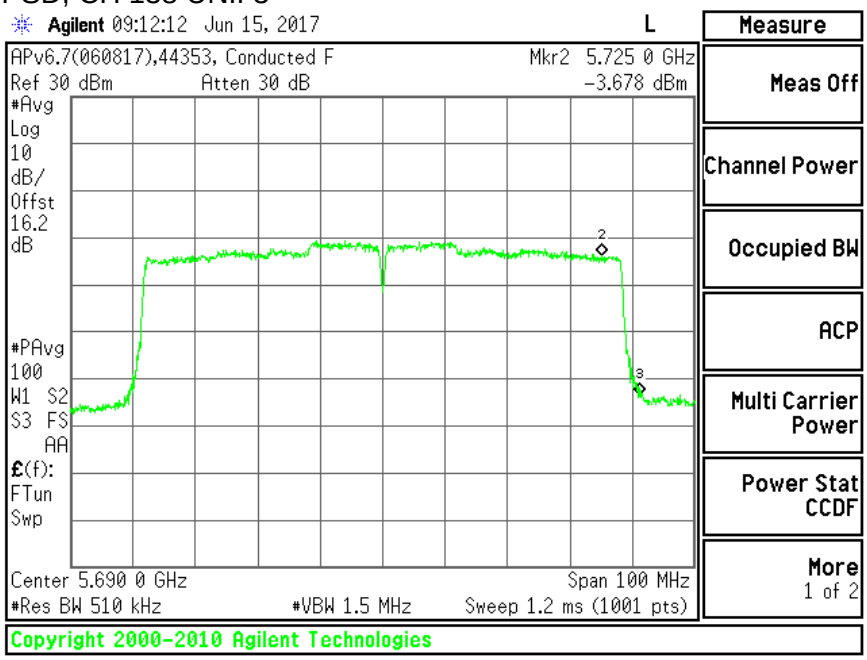
OUTPUT POWER, CH 138 UNII 3



PSD, CH 138 UNII 3



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8.32.6. 6 dB BANDWIDTH

LIMITS

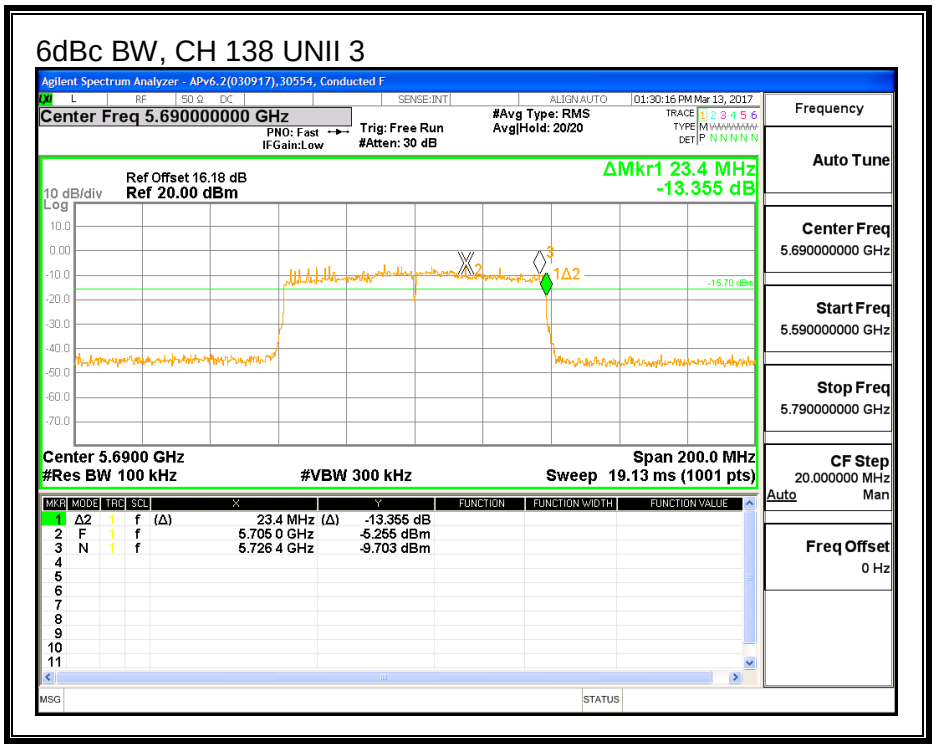
FCC §15.407 (e)

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

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)
High	5690	23.40

6 dB BANDWIDTH



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8.33. 11ac HT80 2TX CDD MIMO MODE IN THE 5.6GHz BAND

8.33.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency	26 dB BW UAT 2 (MHz)	26 dB BW LAT 3 (MHz)
Low	5530	82.4	82.0
High	5610	82.4	82.4
138	5690	82.4	82.2

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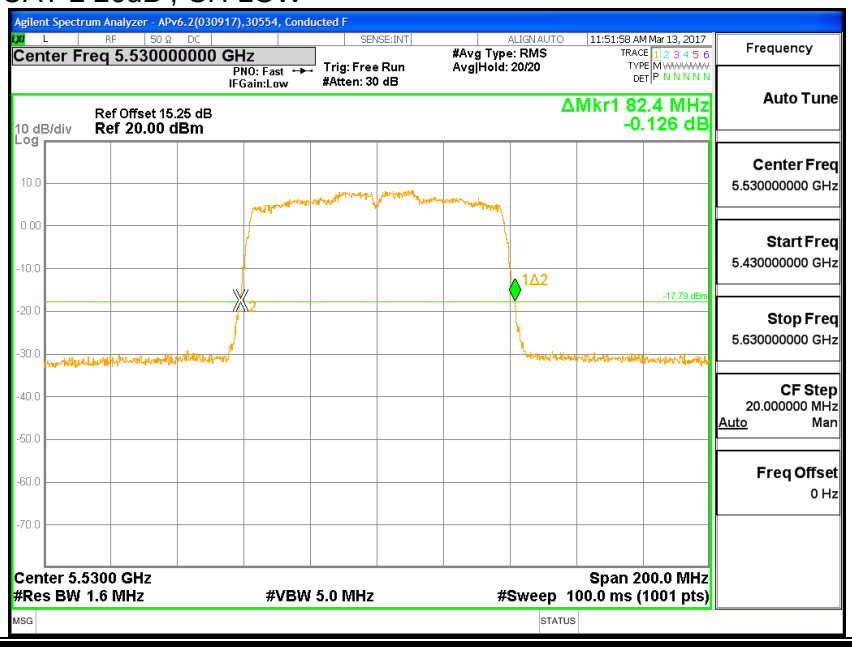
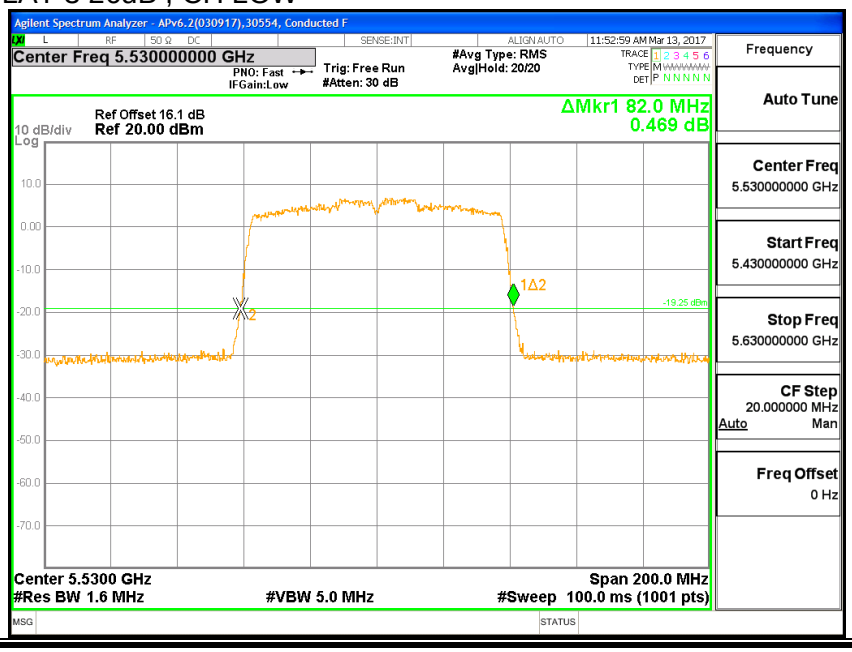
UAT 2 26dB , CH LOW



LAT 3 26dB , CH LOW



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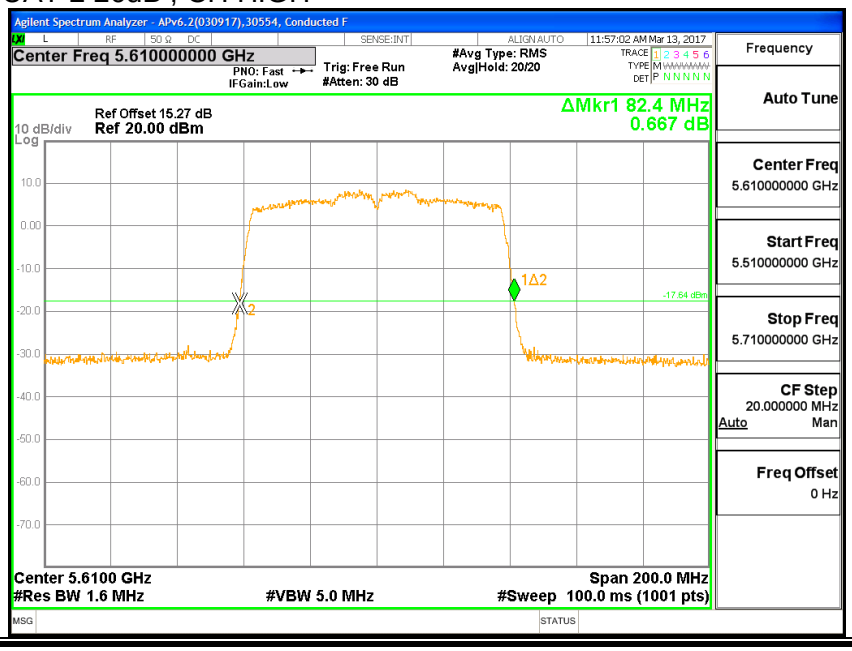
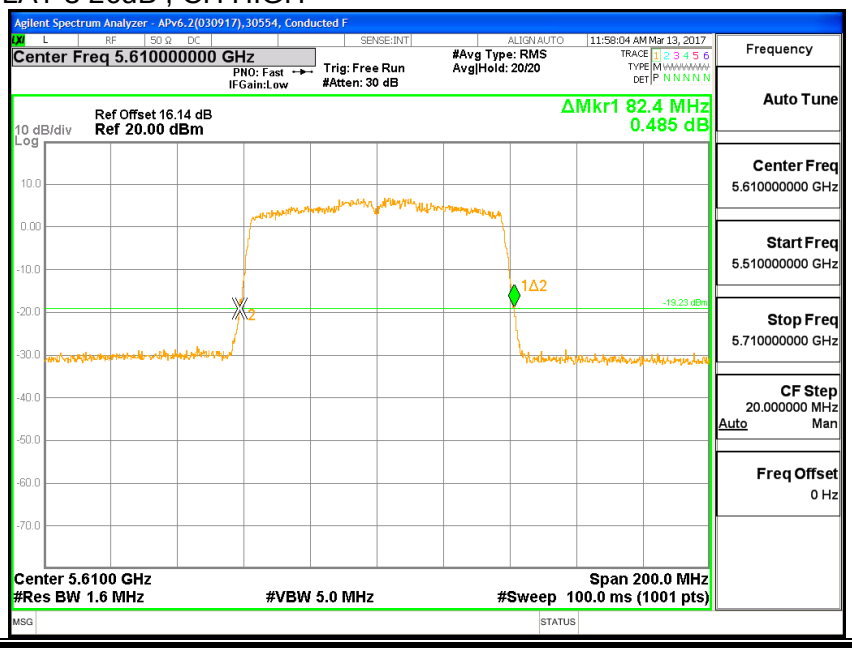
UAT 2 26dB , CH HIGH



LAT 3 26dB , CH HIGH



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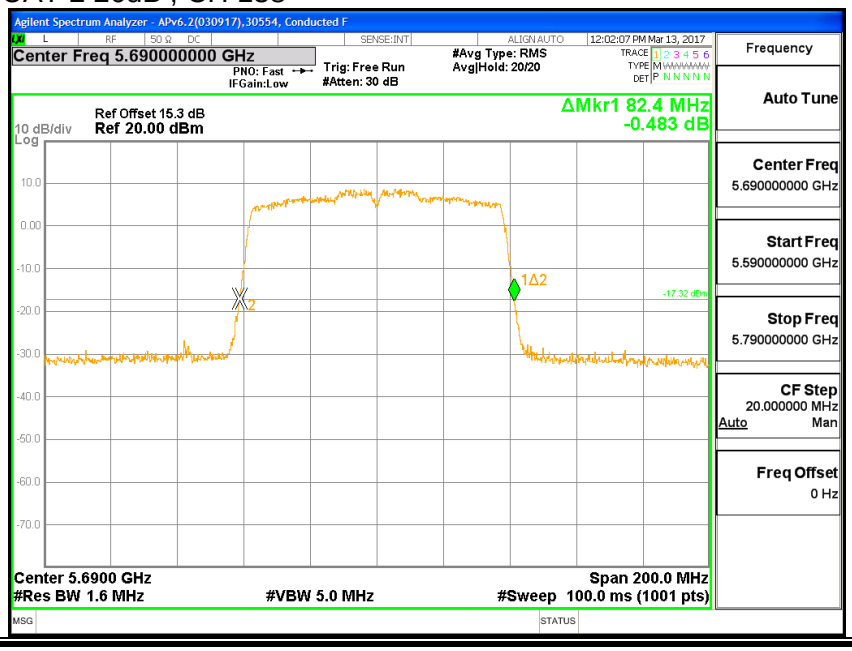
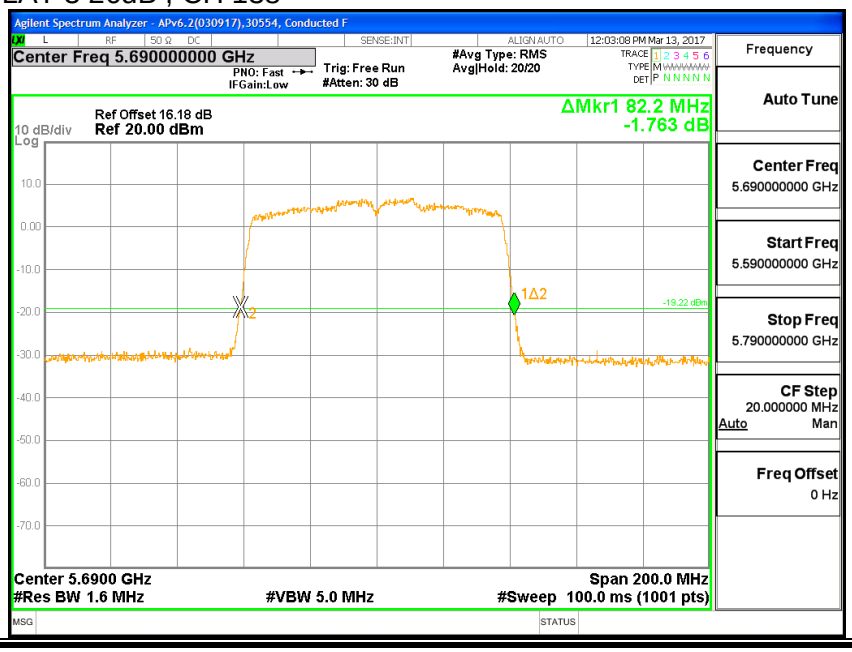
UAT 2 26dB , CH 138



LAT 3 26dB , CH 138



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8.33.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency	99% BW UAT 2 (MHz)	99% BW LAT 3 (MHz)
Low	5530	75.589	76.061
High	5610	72.589	75.533
138	5690	75.263	75.721

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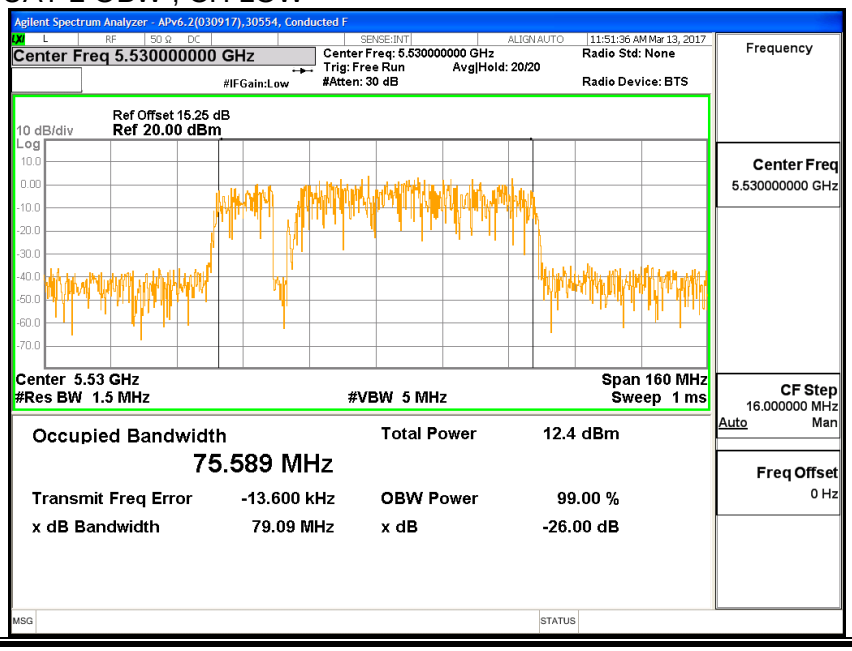
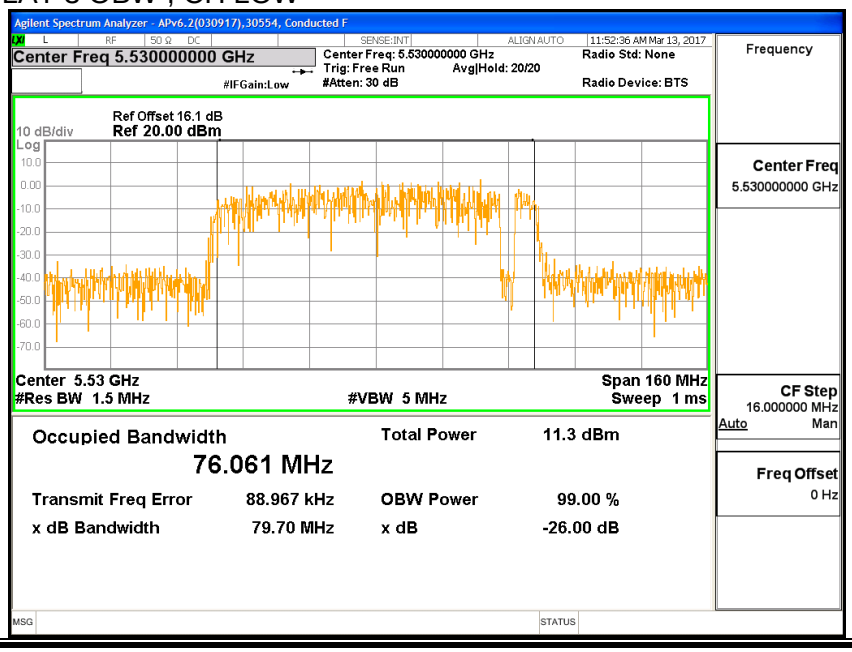
UAT 2 OBW , CH LOW



LAT 3 OBW , CH LOW



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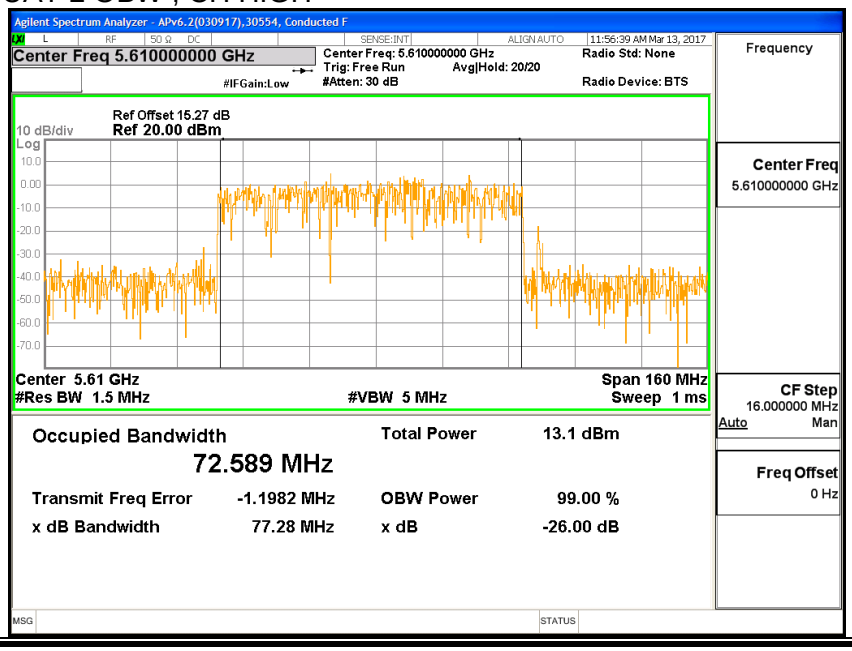
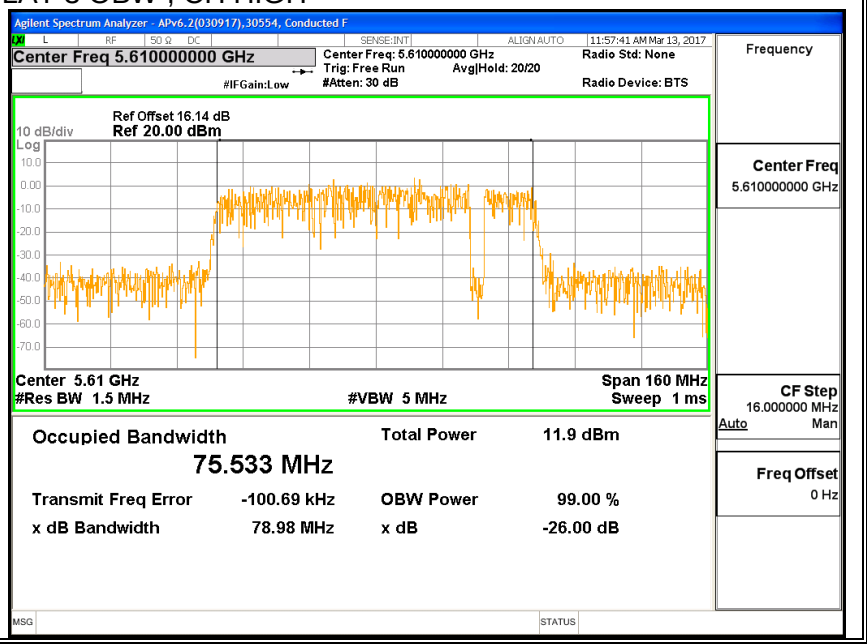
UAT 2 OBW , CH HIGH



LAT 3 OBW , CH HIGH



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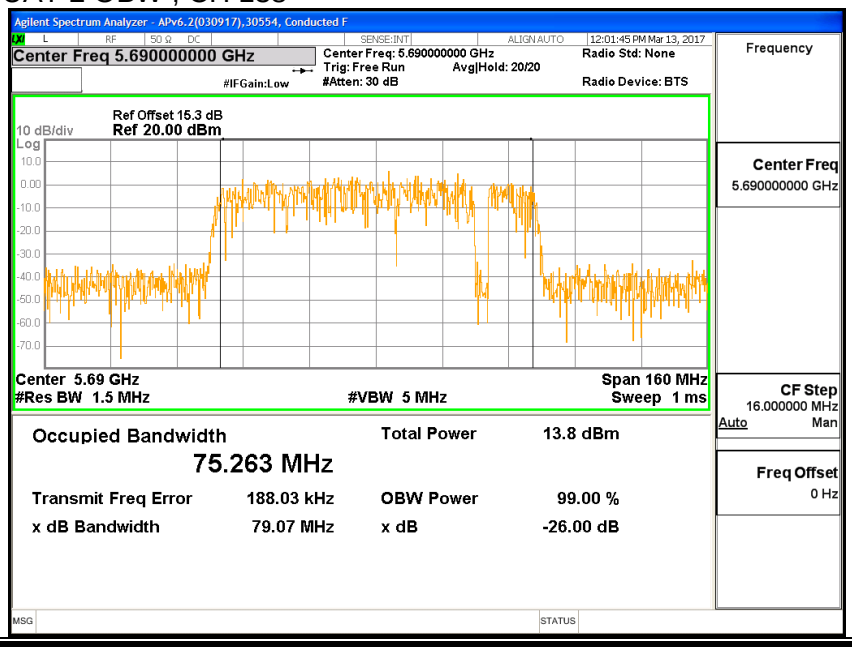
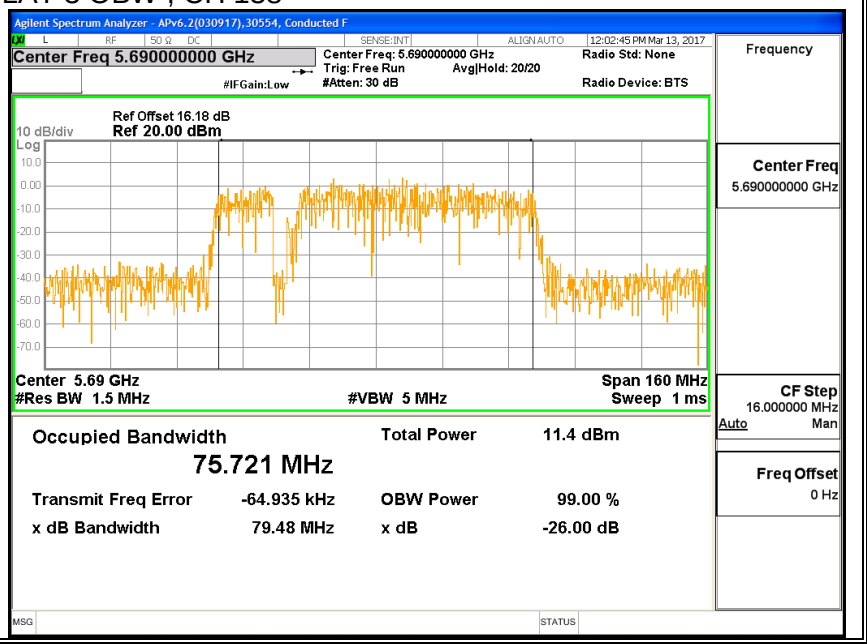
UAT 2 OBW , CH 138



LAT 3 OBW , CH 138



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8.33.3. AVERAGE POWER

ID:	30554	Date:	6/13/2017

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Average Power Results

Channel	Frequency (MHz)	UAT 2 Power (dBm)	LAT 3 Power (dBm)	Total Power (dBm)
Low	5530	13.81	13.95	16.89
High	5610	18.92	18.86	21.90
138	5690	18.77	18.82	21.81

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8.33.4. OUTPUT POWER AND PPSD

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. However, PSD measurement was measured by Spectrum Analyzer and duty cycle factor is required

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

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DIRECTIONAL ANTENNA GAIN

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

UAT 2 Antenna Gain (dBi)	LAT 3 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
-0.75	-0.96	-0.85

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

UAT 2 Antenna Gain (dBi)	LAT 3 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
-0.75	-0.96	2.16

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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	82.00	75.589	-0.85	2.16	24.00	11.00
High	5610	82.40	72.589	-0.85	2.16	24.00	11.00

Duty Cycle CF (dB)	0.20	Included in Calculations of Corr'd PSD

Output Power Results

Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5530	13.81	13.95	16.89	24.00	-7.11
High	5610	18.92	18.86	21.90	24.00	-2.10

PSD Results

Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5530	-1.22	-0.86	2.18	11.00	-8.82
High	5610	2.16	0.38	4.57	11.00	-6.43

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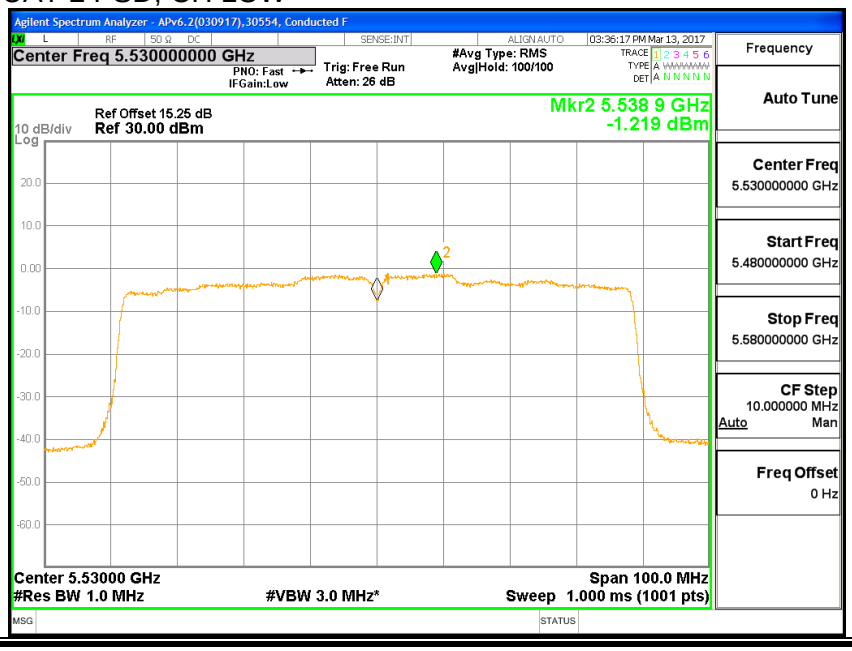
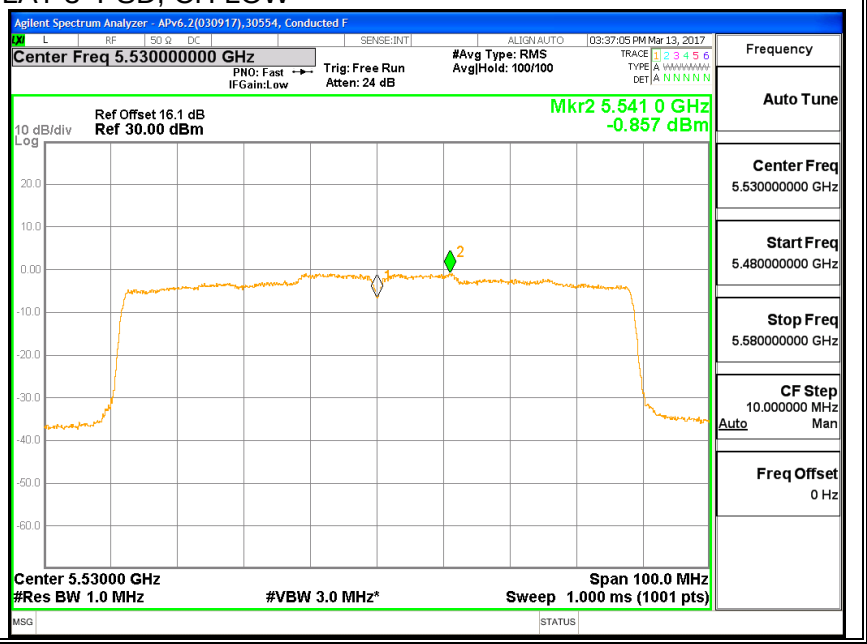
UAT 2 PSD, CH LOW



LAT 3 PSD, CH LOW



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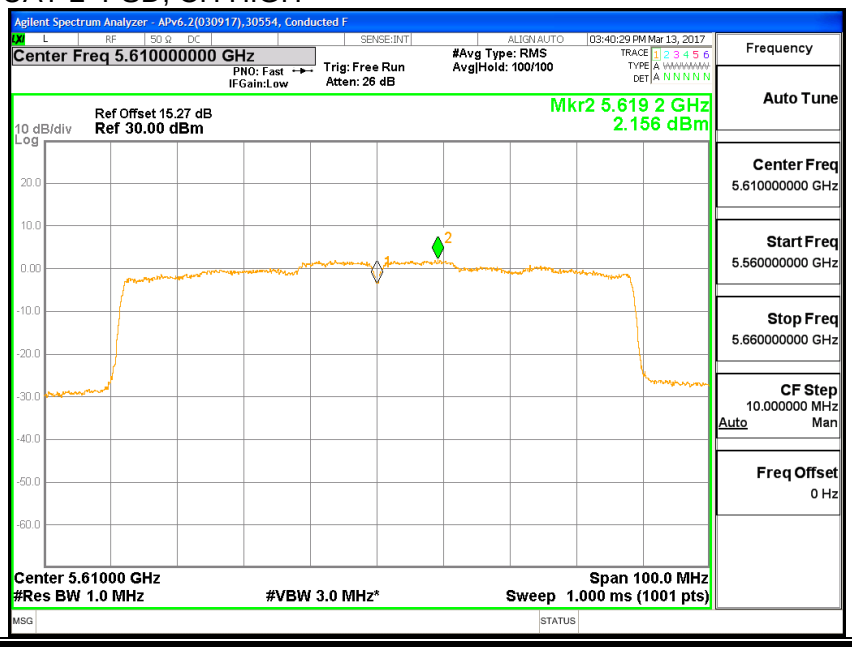
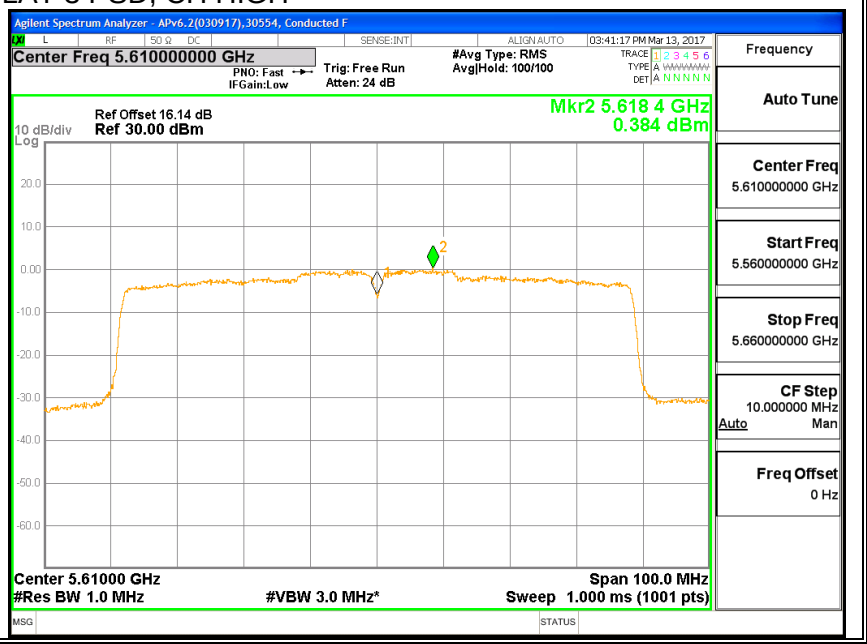
UAT 2 PSD, CH HIGH



LAT 3 PSD, CH HIGH



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8.33.5. STRADDLE CHANNEL 138 RESULTS

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	76.10	-0.85	2.16	24.00	11.00

Duty Cycle CF (dB)	0.20	Included in Calculations of Corr'd Power & PSD

Output Power Results

Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	18.49	18.53	21.72	24.00	-2.28

PSD Results

Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	2.48	2.73	5.82	11.00	-5.18

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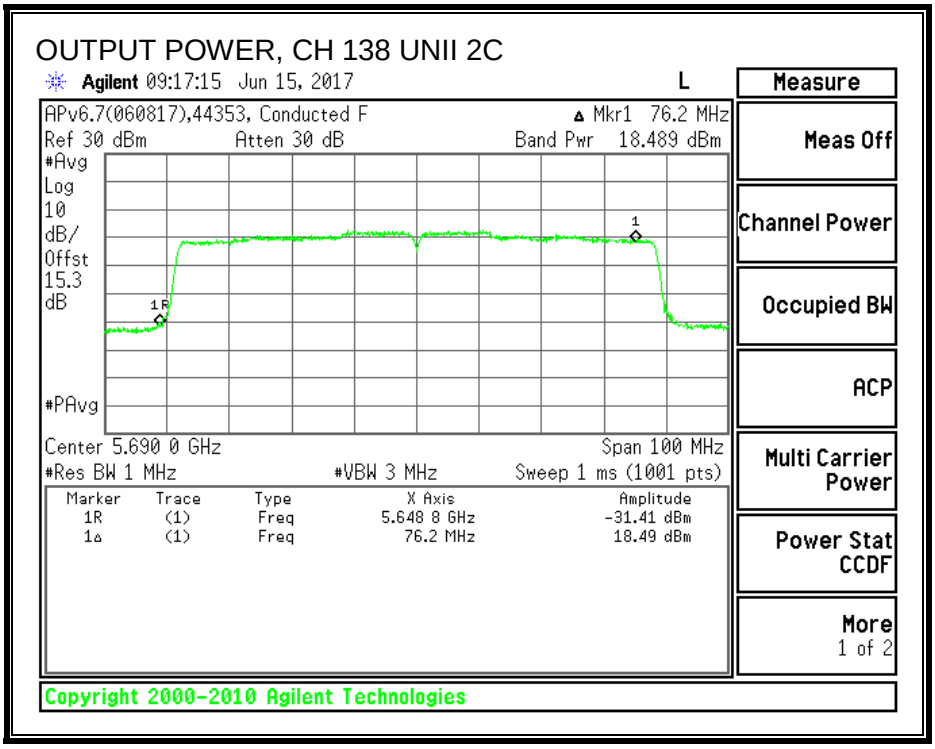
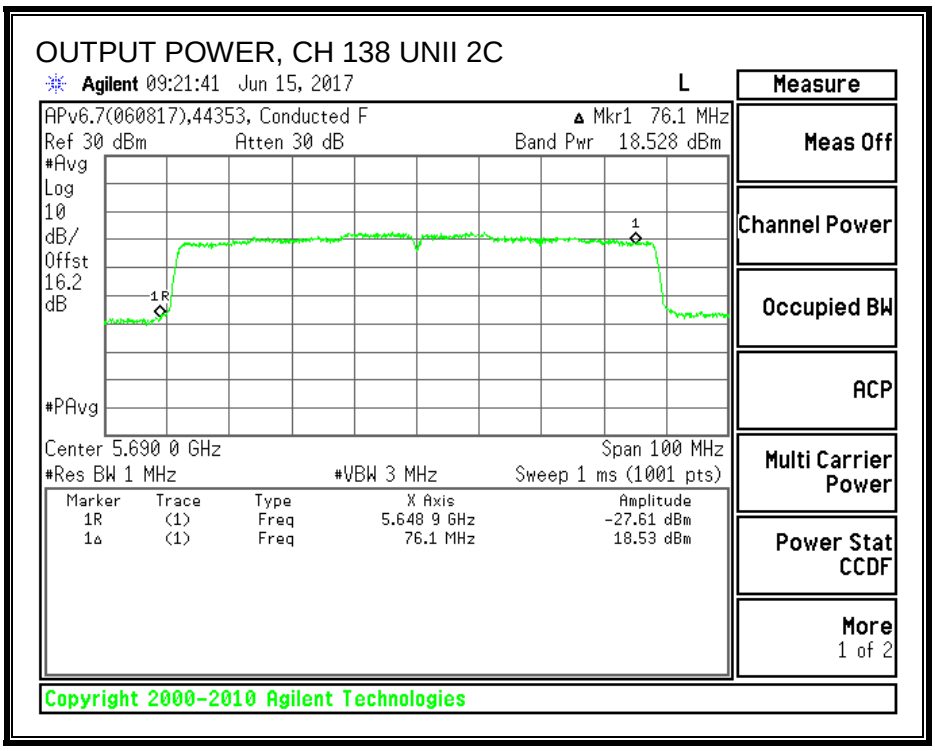
OUTPUT POWER, UAT 2



OUTPUT POWER, LAT 3



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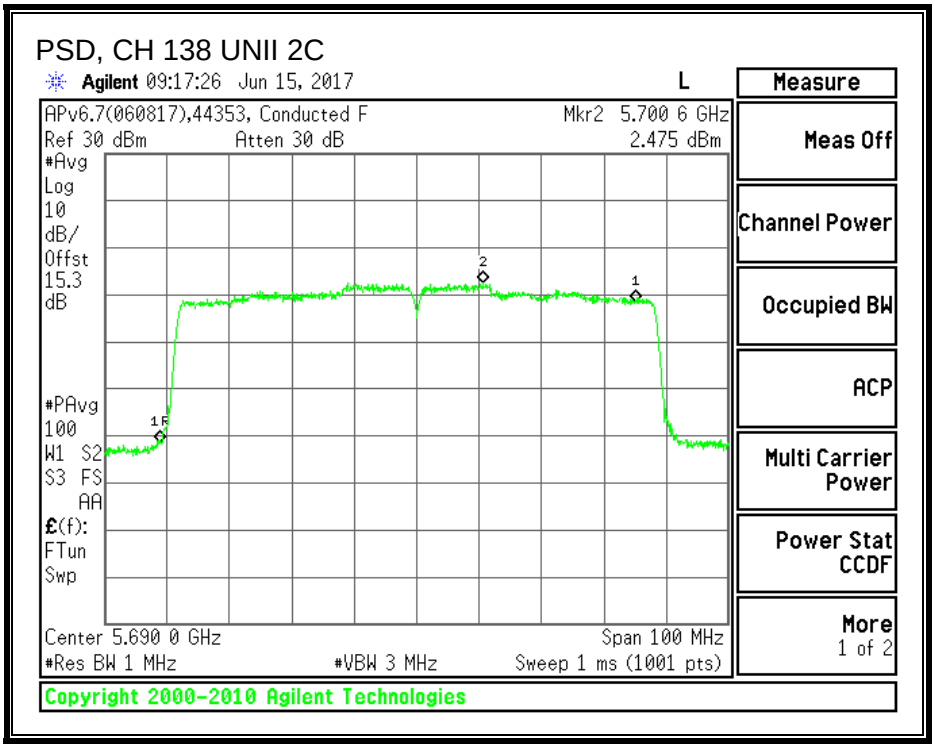
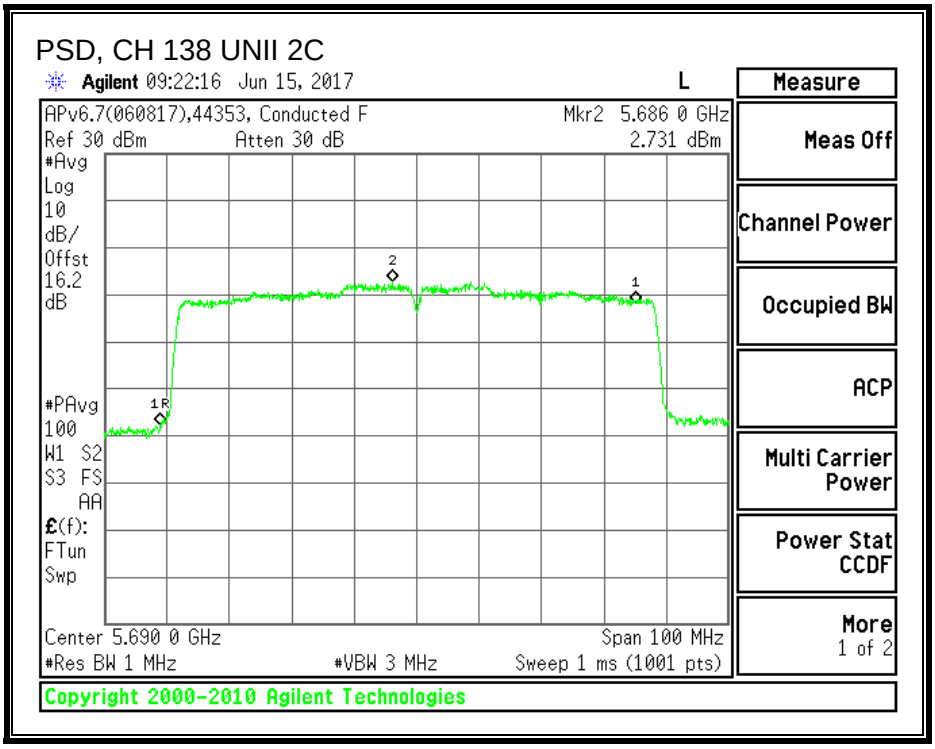
PSD, UAT 2



PSD, LAT 3



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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	6.10	-0.05	2.92	30.00	30.00

Duty Cycle CF (dB)	0.20	Included in Calculations of Corr'd Power & PSD

Output Power Results

Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	3.53	3.50	6.72	30.00	-23.28

PSD Results

Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	-3.42	-3.21	-0.10	30.00	-30.10

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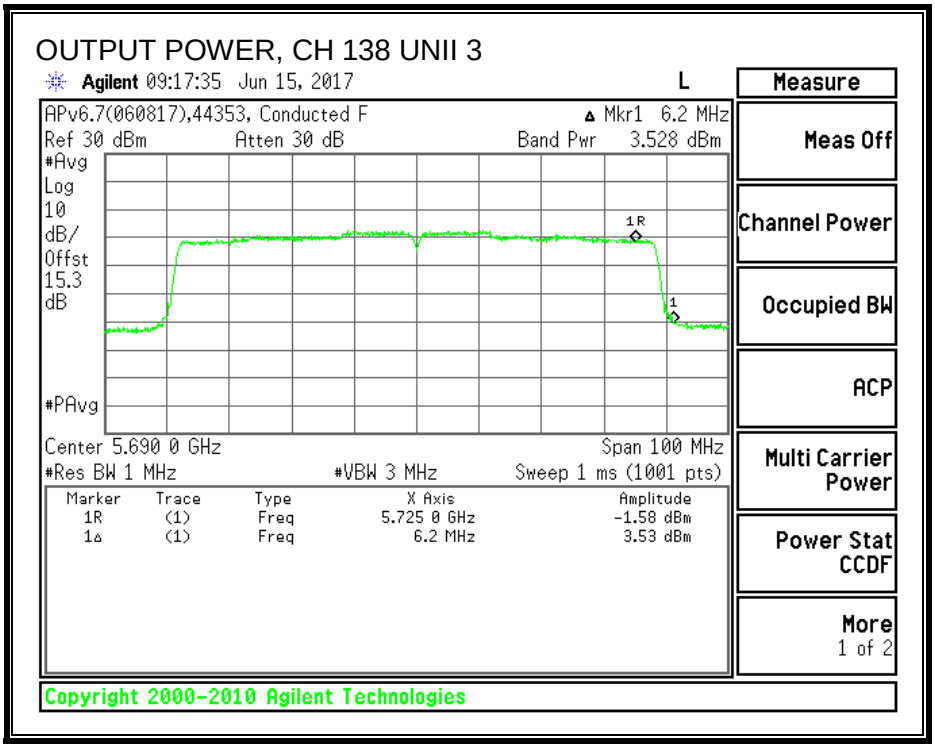
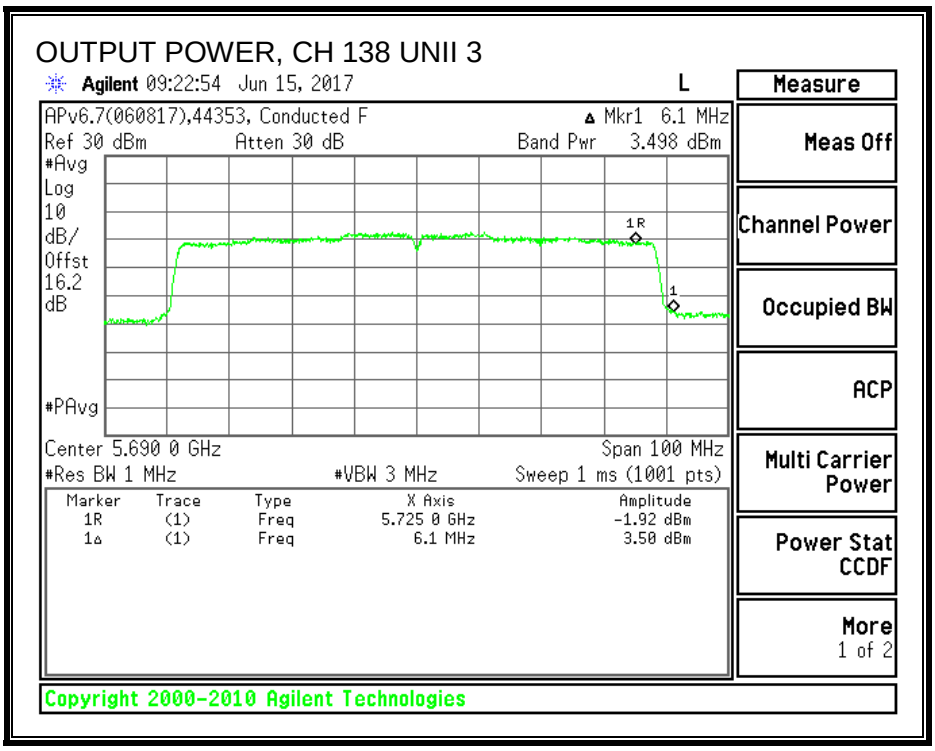
OUTPUT POWER, UAT 2



OUTPUT POWER, LAT 3



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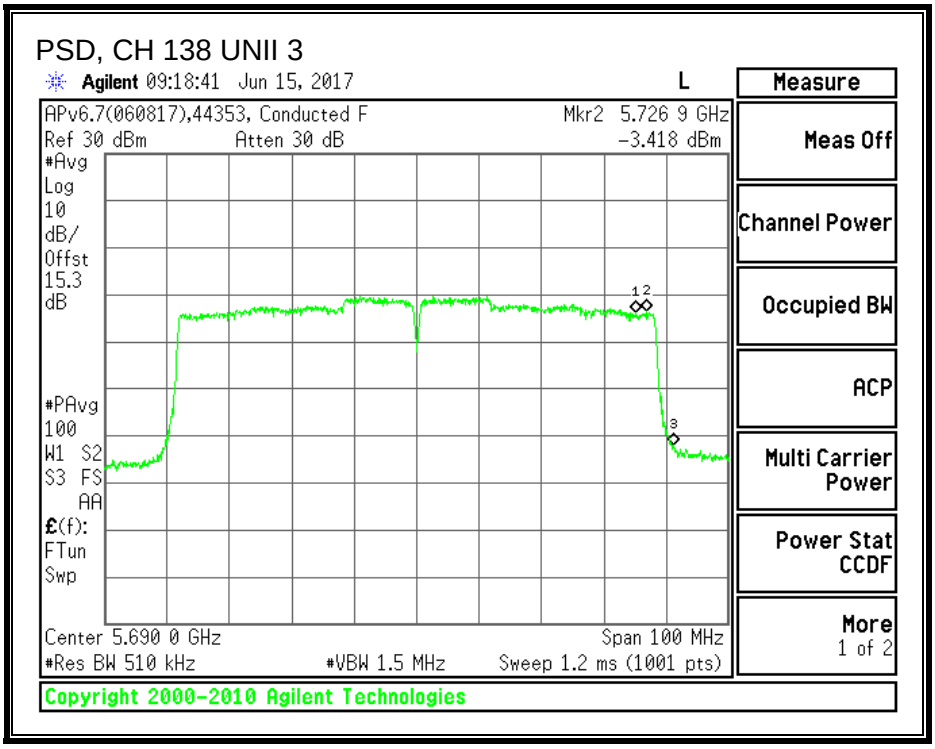
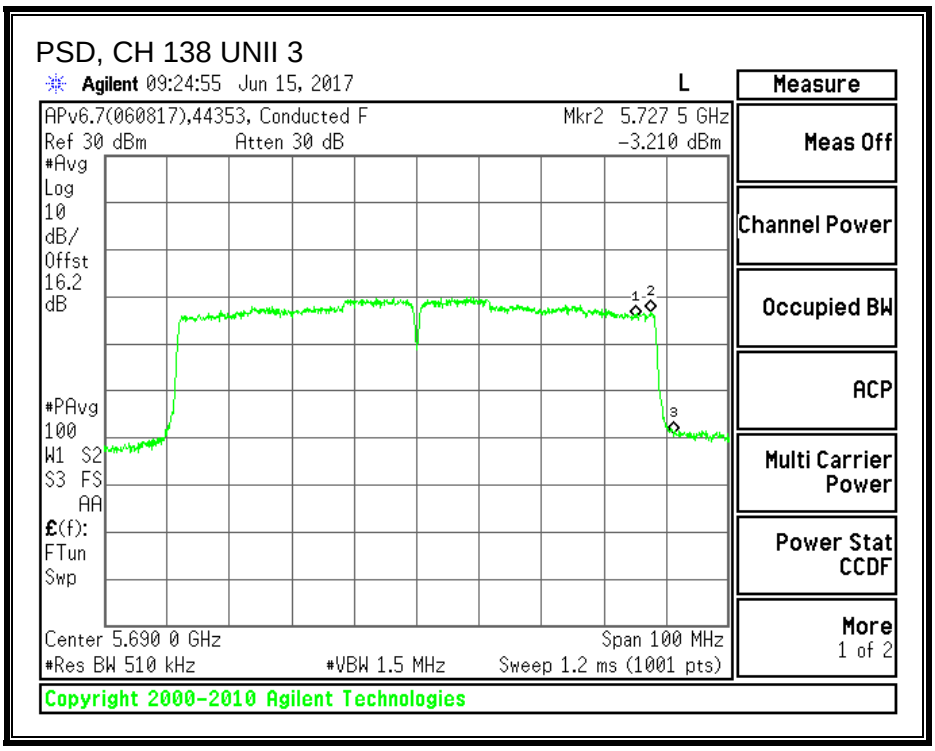
PSD, UAT 2



PSD, LAT 3



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8.33.6. 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 Ant A (MHz)	6 dB BW Ant B (MHz)
High	5690	2.80	3.00

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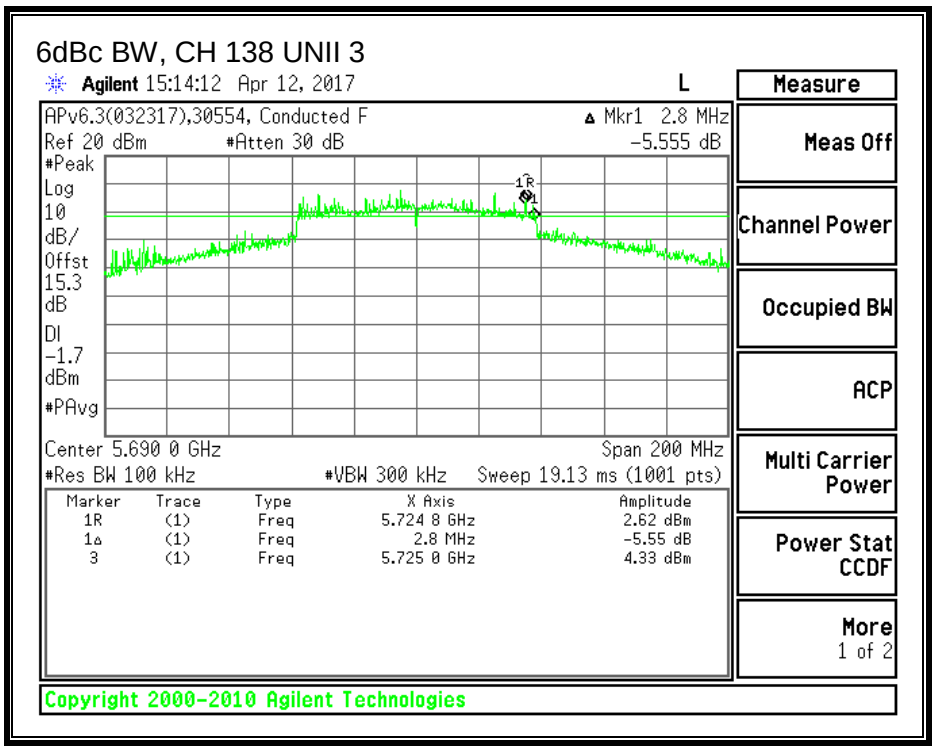
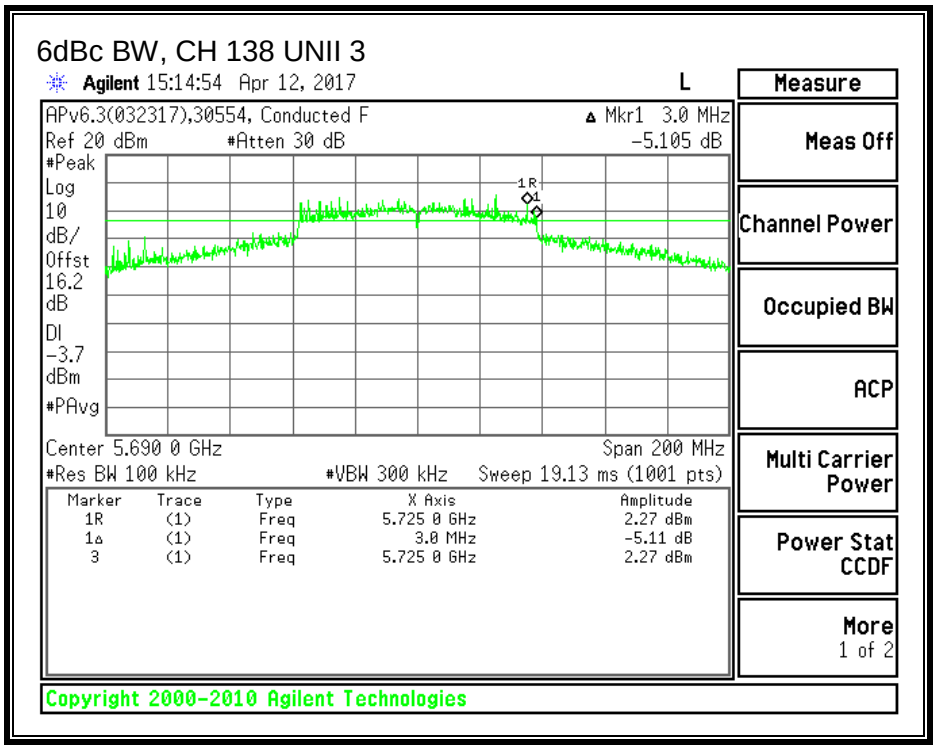
UAT 2



LAT 3



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8.34. 11n HT20 UAT 2 SISO MODE IN THE 5.8GHz BAND

8.34.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

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

RESULTS

Channel	Frequency	6 dB BW UAT 2 (MHz)	Minimum Limit (MHz)
Low	5745	14.95	0.5
Mid	5785	17.30	0.5
High	5825	17.70	0.5

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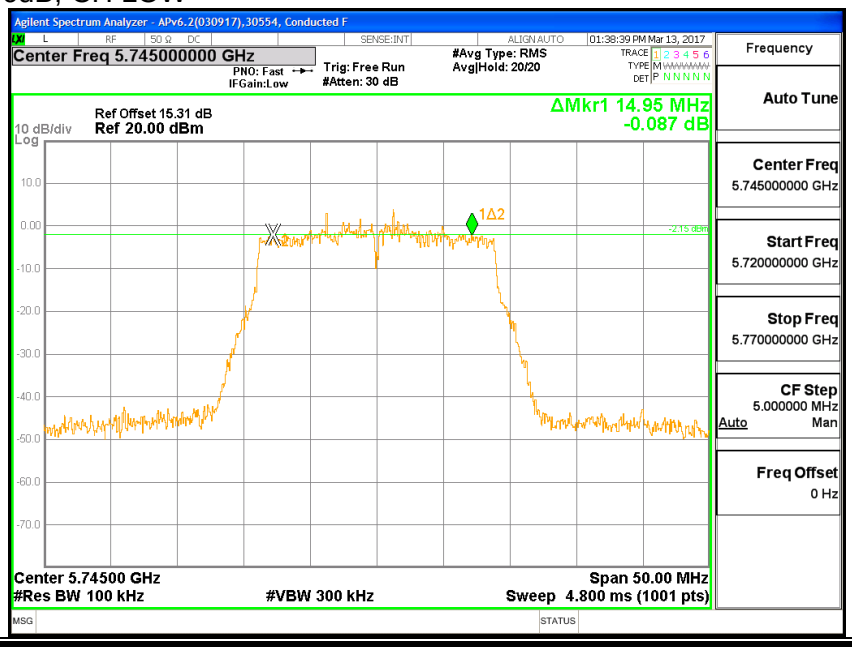
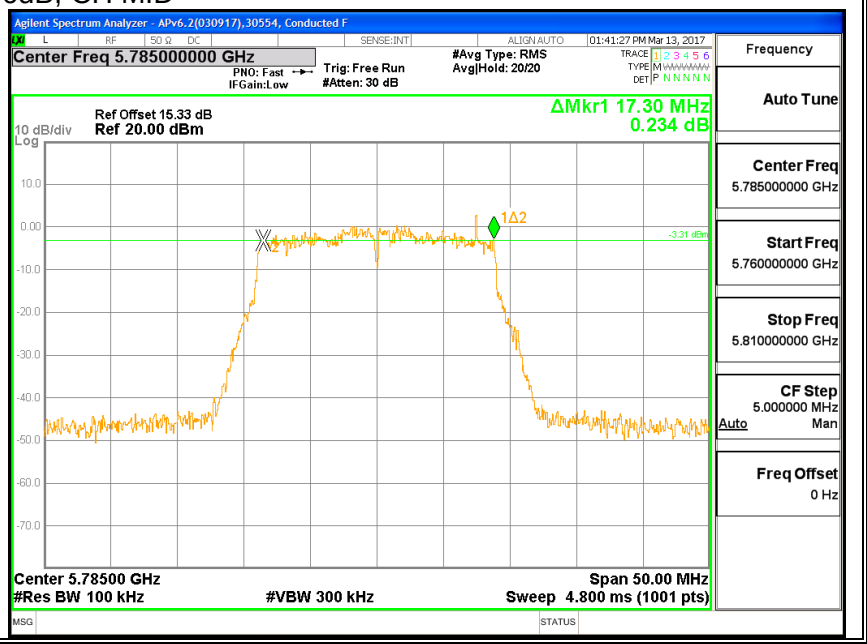
6dB, CH LOW



6dB, CH MID



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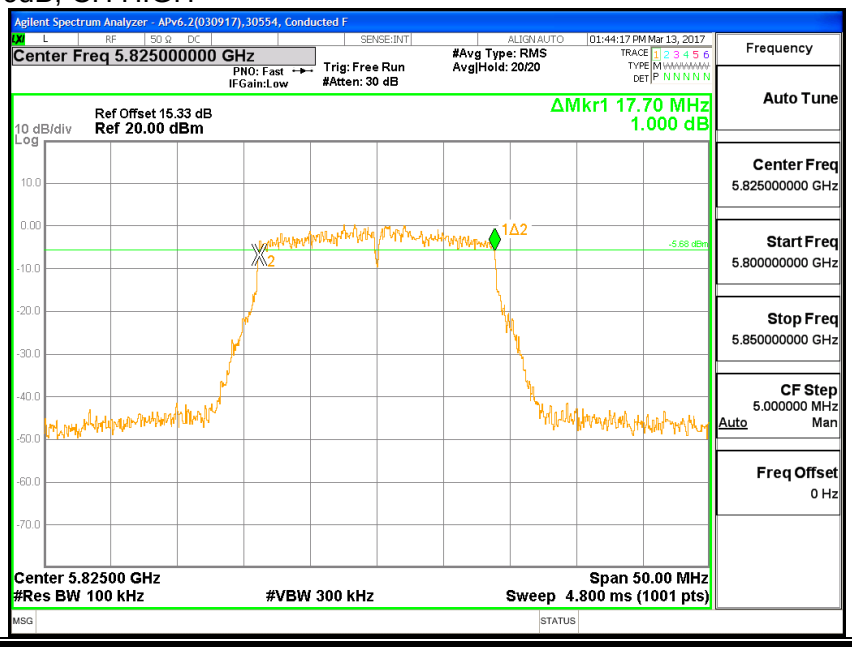
6dB, CH HIGH



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8.34.2. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency	26 dB BW UAT 2 (MHz)
Low	5745	22.00
Mid	5785	21.9
High	5825	22.00

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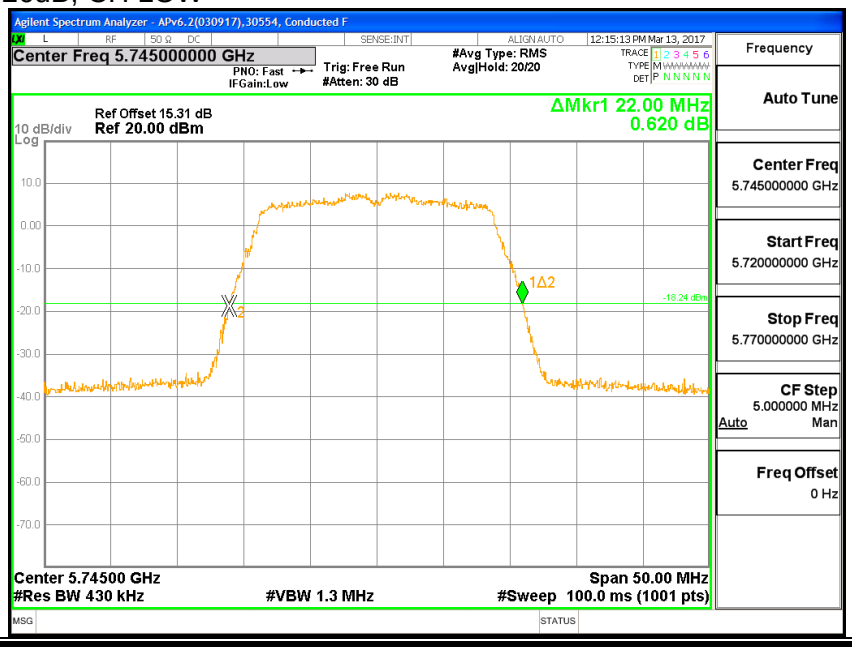
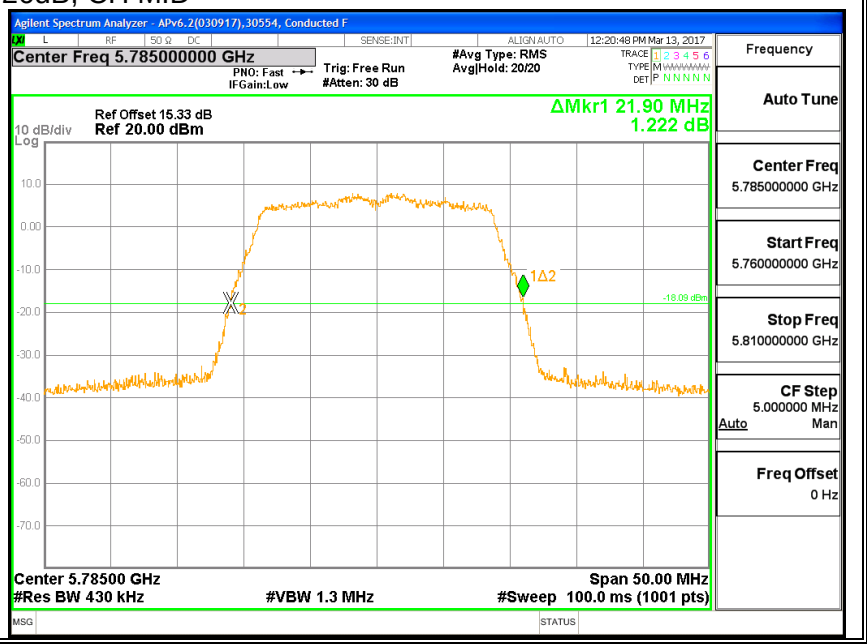
26dB, CH LOW



26dB, CH MID



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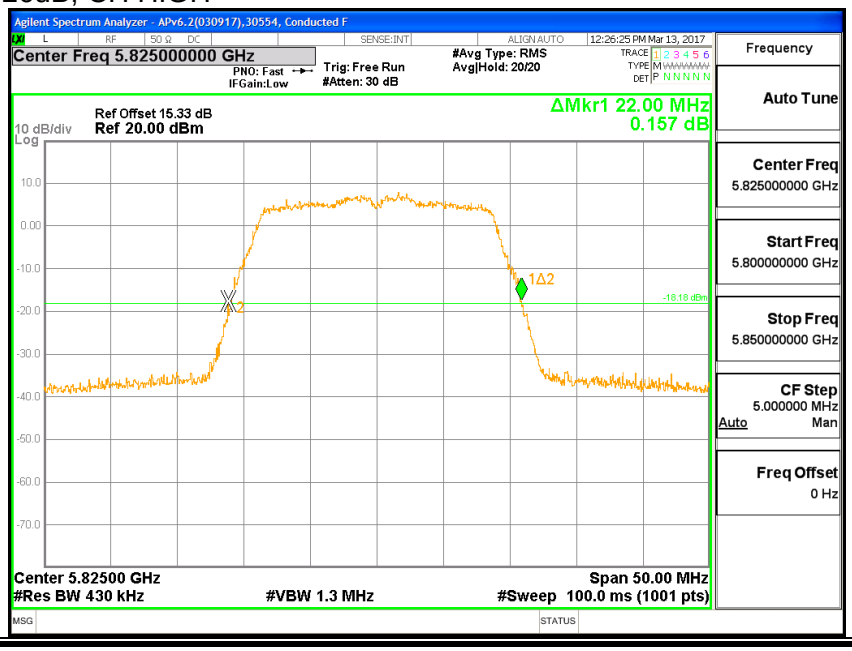
26dB, CH HIGH



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8.34.3. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency	99% BW UAT 2 (MHz)
Low	5745	17.582
Mid	5785	17.742
High	5825	17.488

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