

## **8.25. 11n HT40 UAT 2 SISO MODE IN THE 5.6GHz BAND**

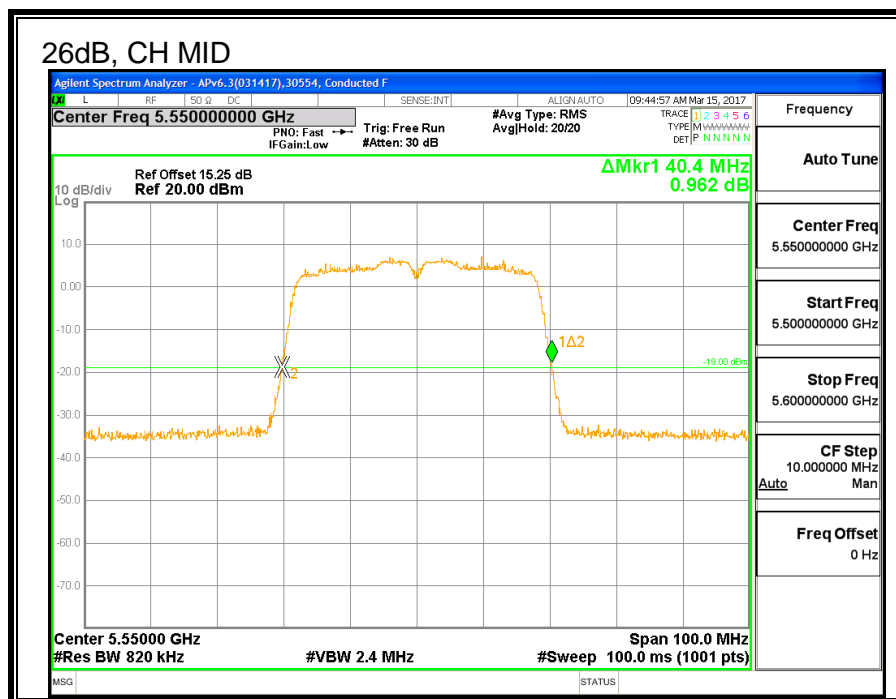
### **8.25.1. 26 dB BANDWIDTH**

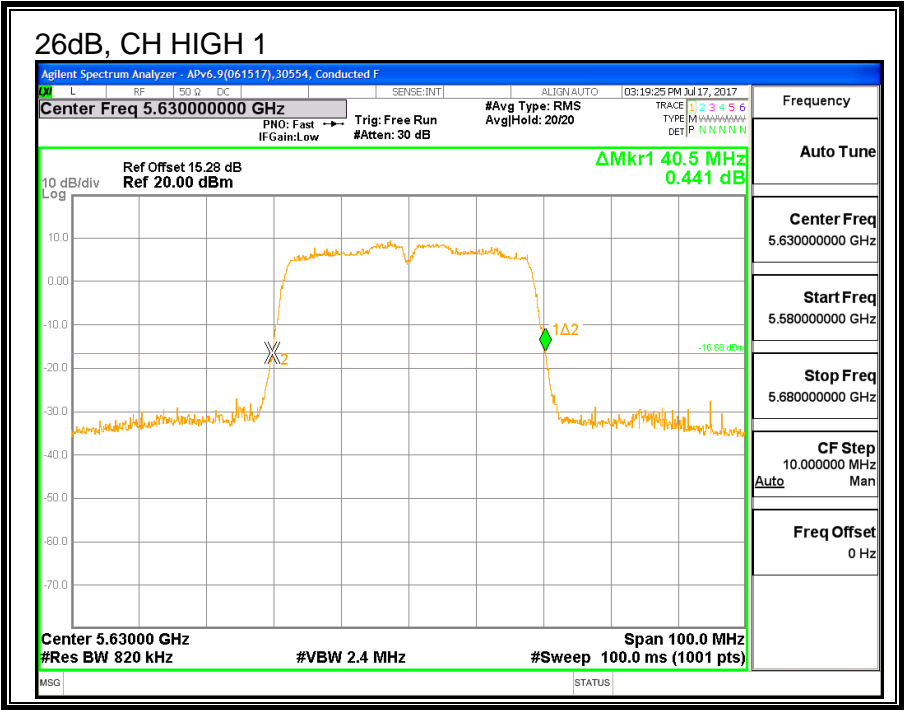
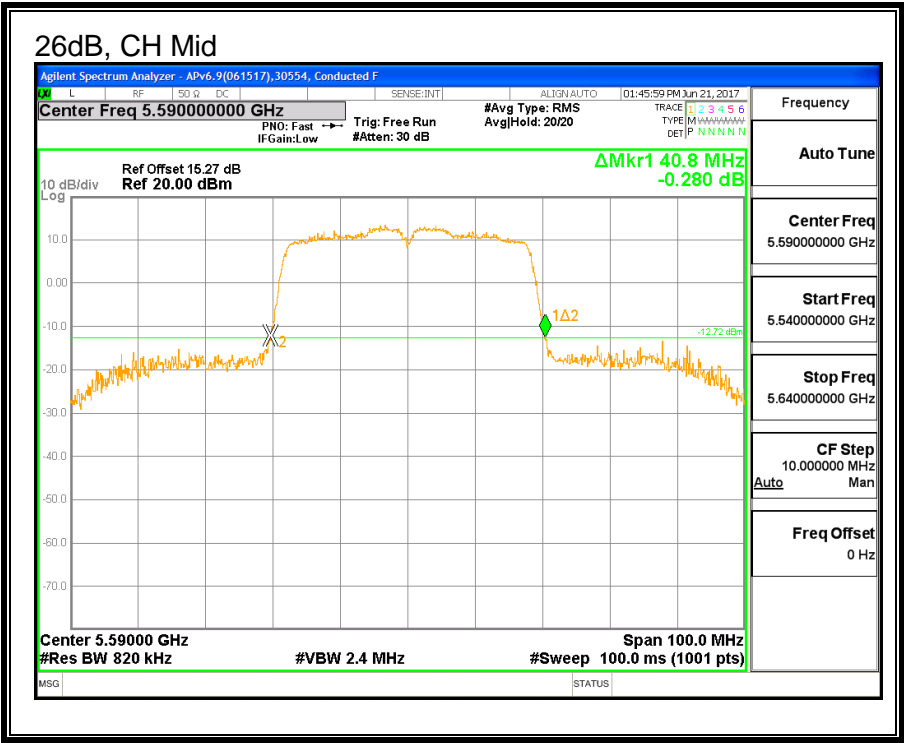
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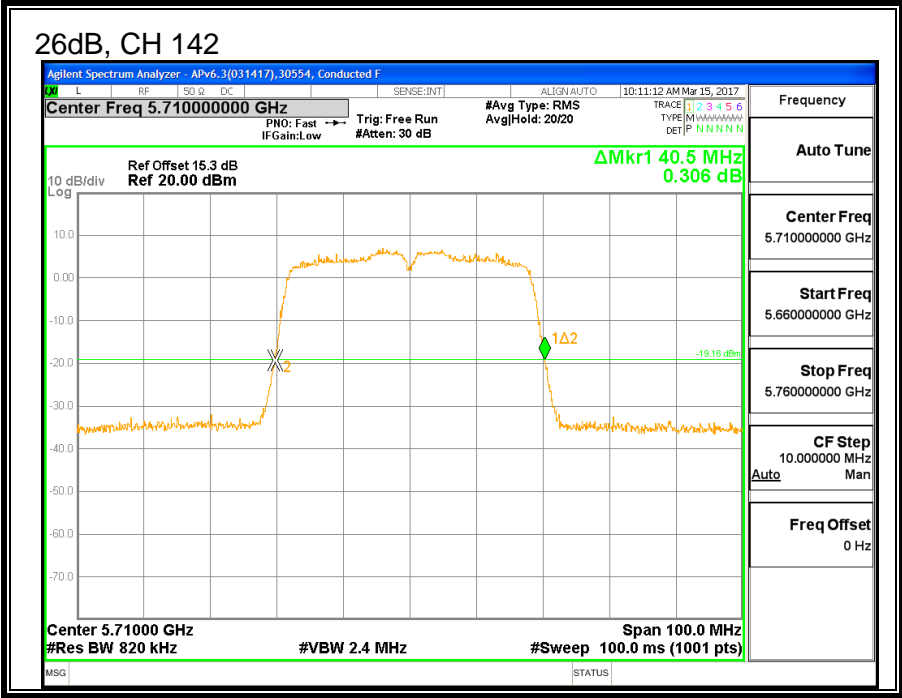
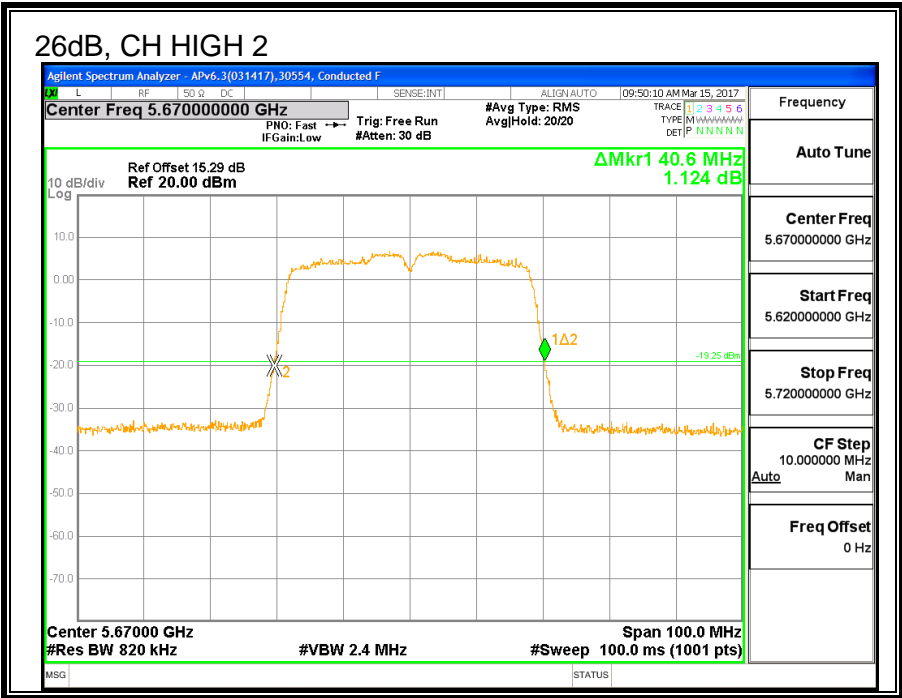
None; for reporting purposes only.

#### **RESULTS**

<b>Channel</b>	<b>Frequency</b>	<b>26 dB BW UAT 2 (MHz)</b>
Low	5510	40.5
Mid	5550	40.4
Mid	5590	40.8
High 1	5630	40.5
High 2	5670	40.6
142	5710	40.5







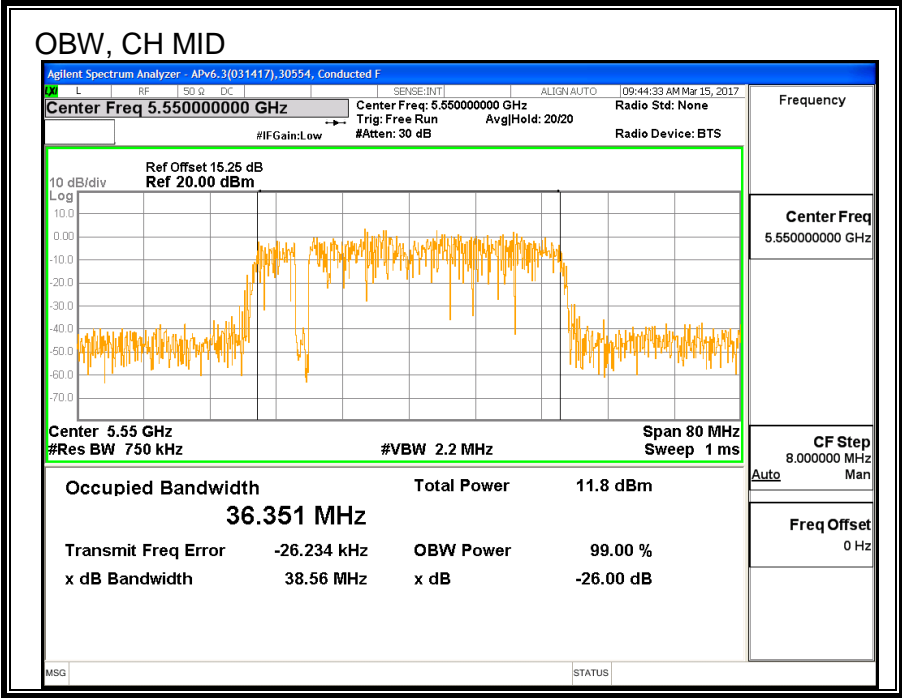
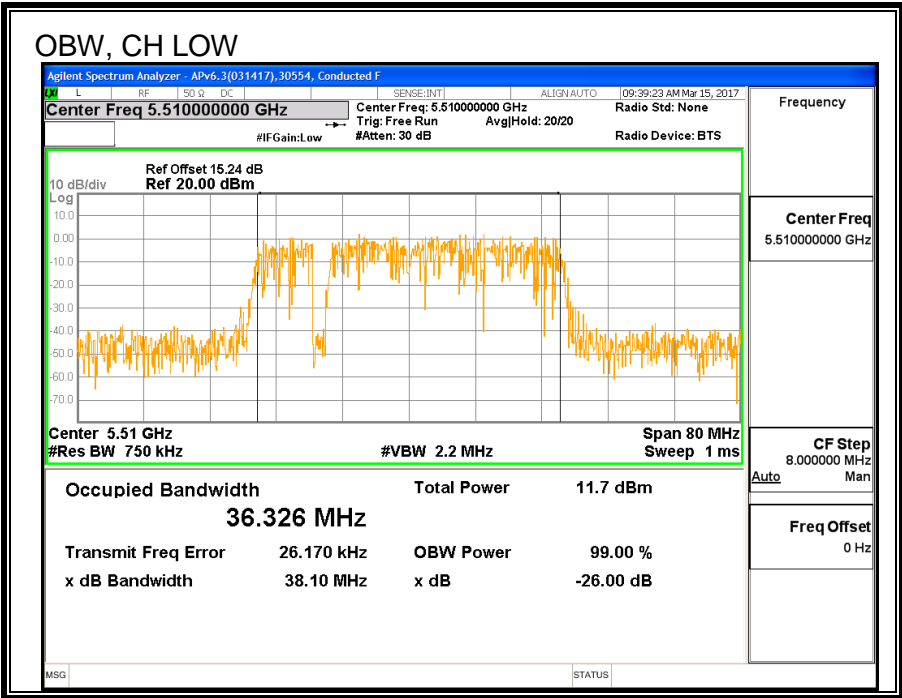
## 8.25.2. 99% BANDWIDTH

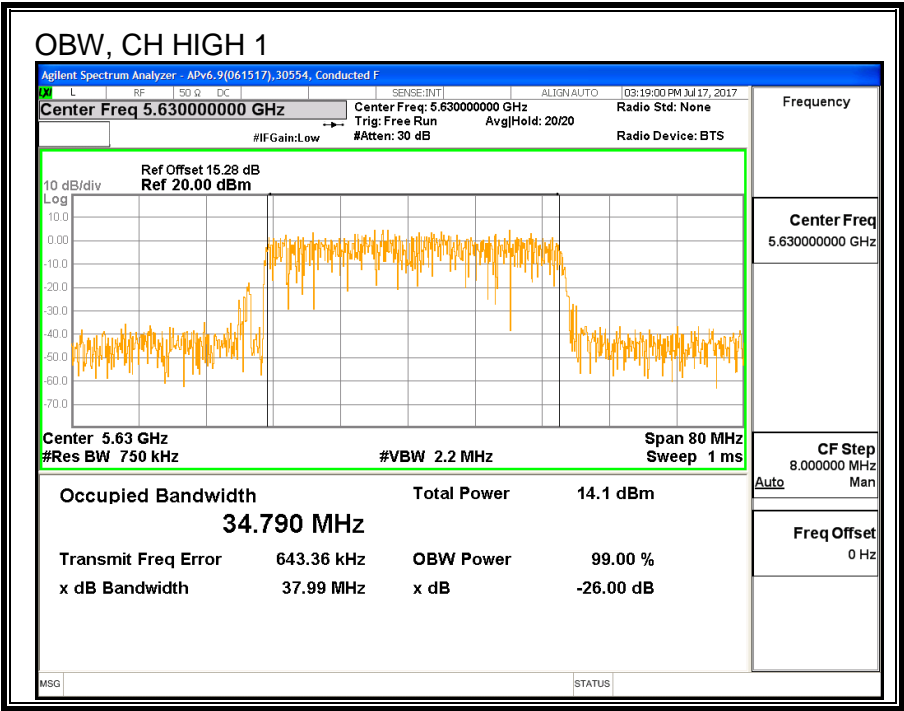
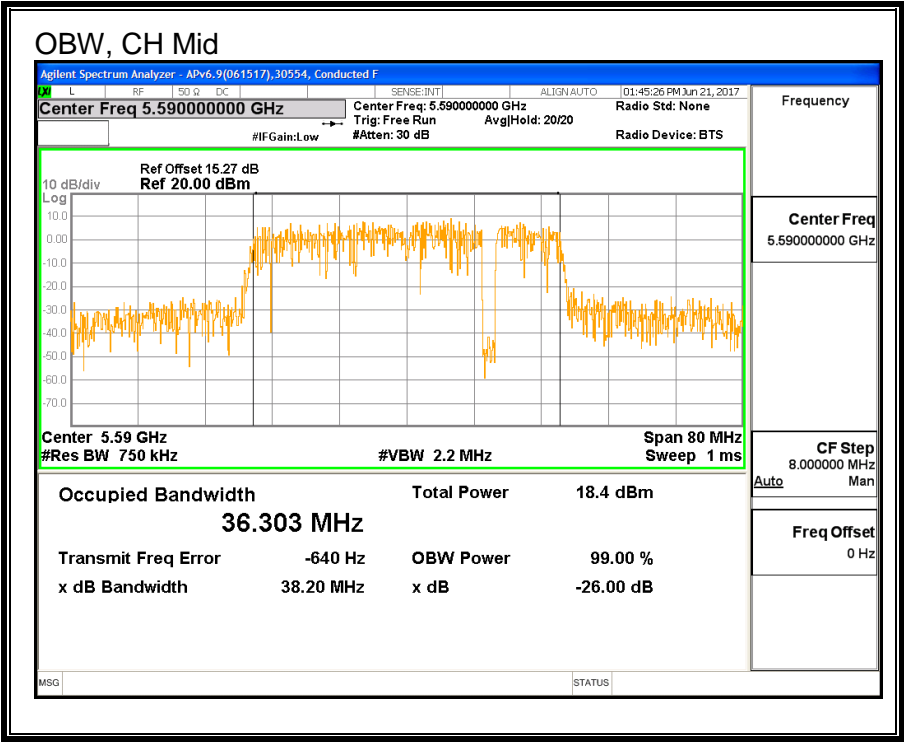
### LIMITS

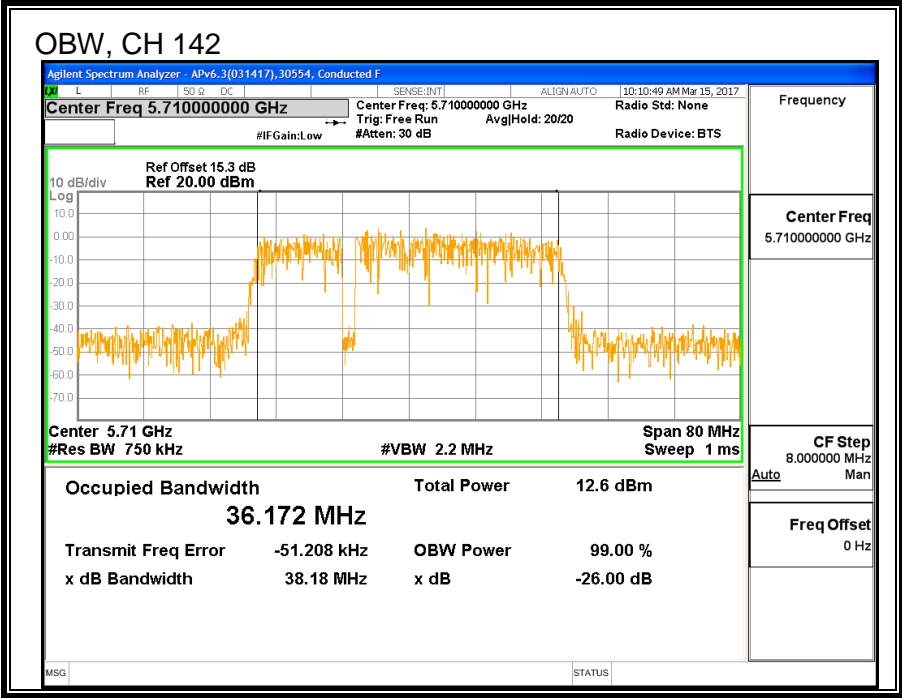
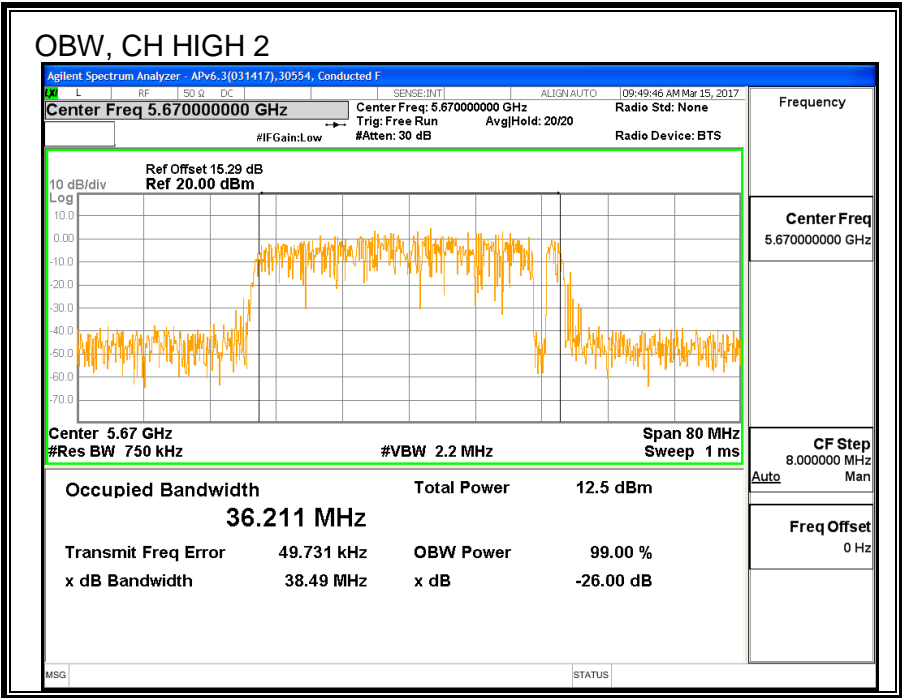
None; for reporting purposes only.

### RESULTS

Channel	Frequency	99% BW UAT 2 (MHz)
Low	5510	36.326
Mid	5550	36.351
Mid	5590	36.303
High 1	5630	34.790
High 2	5670	36.211
142	5710	36.172









### 8.25.3. AVERAGE POWER

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#### 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	5510	15.89
Mid	5550	18.71
Mid	5590	19.34
High 1	5630	18.44
High 2	5670	17.41
142	5710	19.34

#### **8.25.4. 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  $11 \text{ dBm} + 10 \log B$ , 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.

PSD test procedure: KDB 789033 D02 v01r04 Section F (SA-2 method)

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	5510	40.50	36.326	-0.75	24.00	11.00
Mid	5550	40.40	36.351	-0.75	24.00	11.00
Mid	5590	40.80	36.303	-0.75	24.00	11.00
High 1	5630	40.50	34.790	-0.75	24.00	11.00
High 2	5670	40.60	36.211	-0.75	24.00	11.00

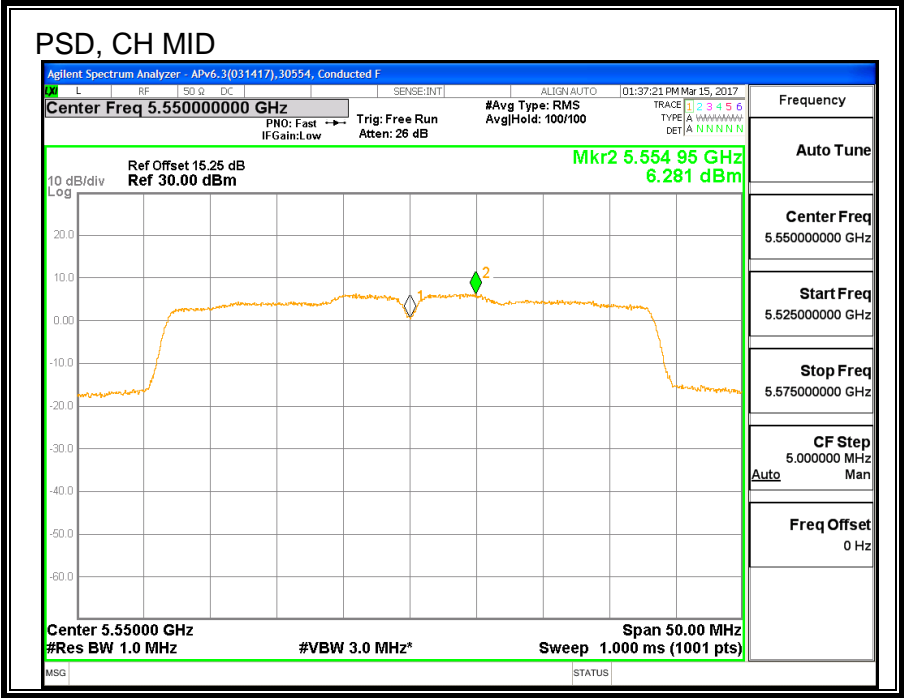
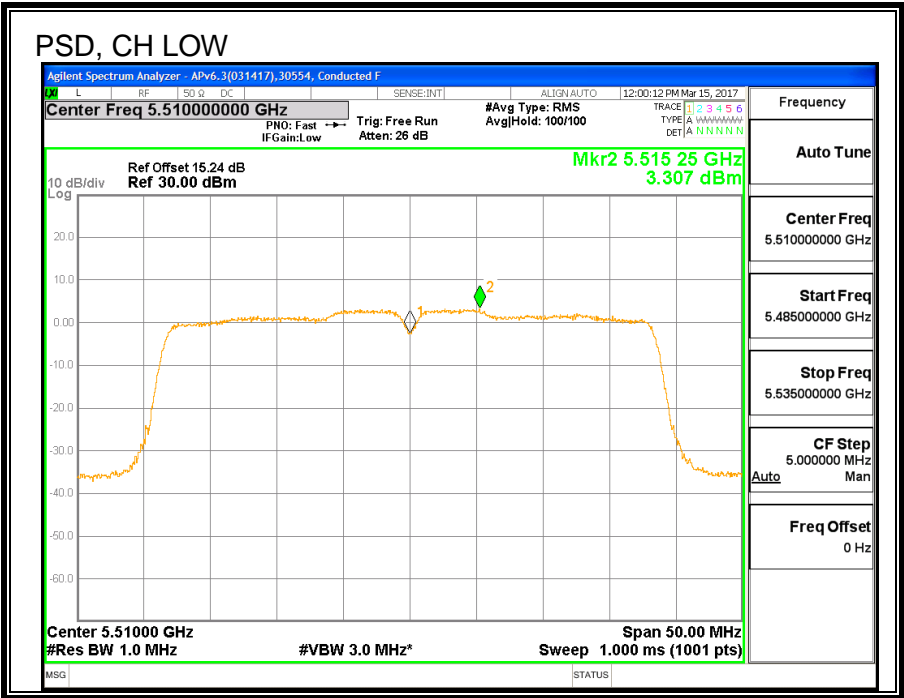
Duty Cycle CF (dB)	0.09	Included in Calculations of Corr'd PSD
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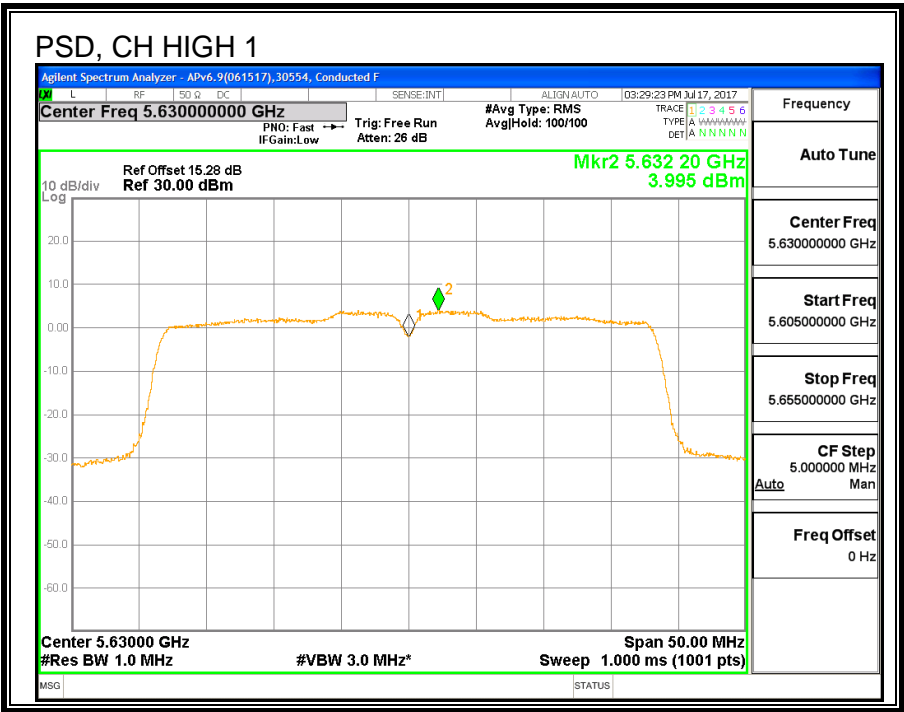
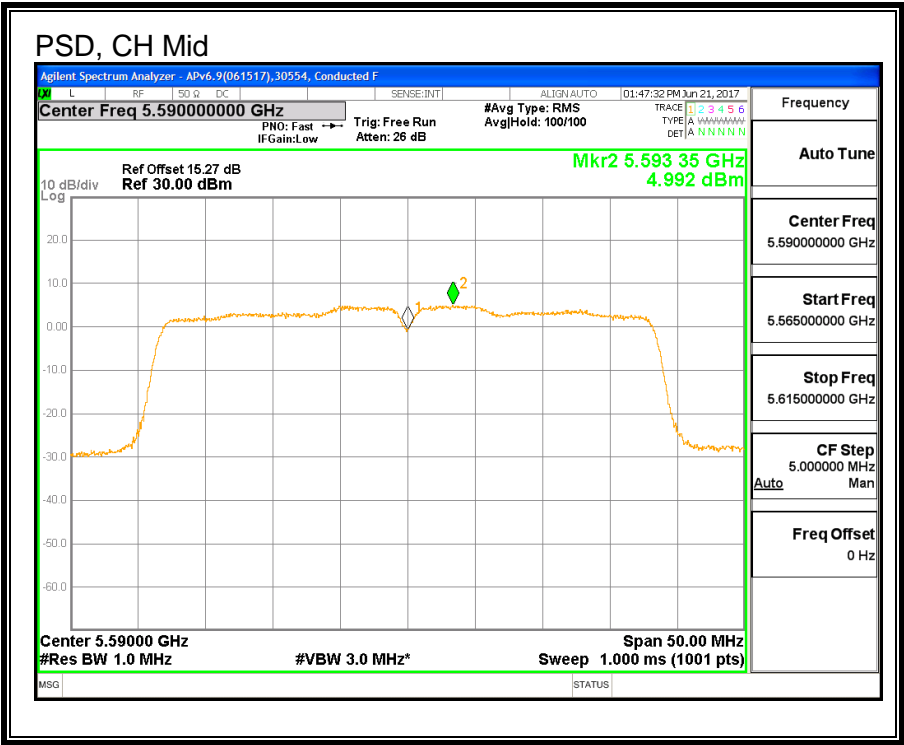
### Output Power Results

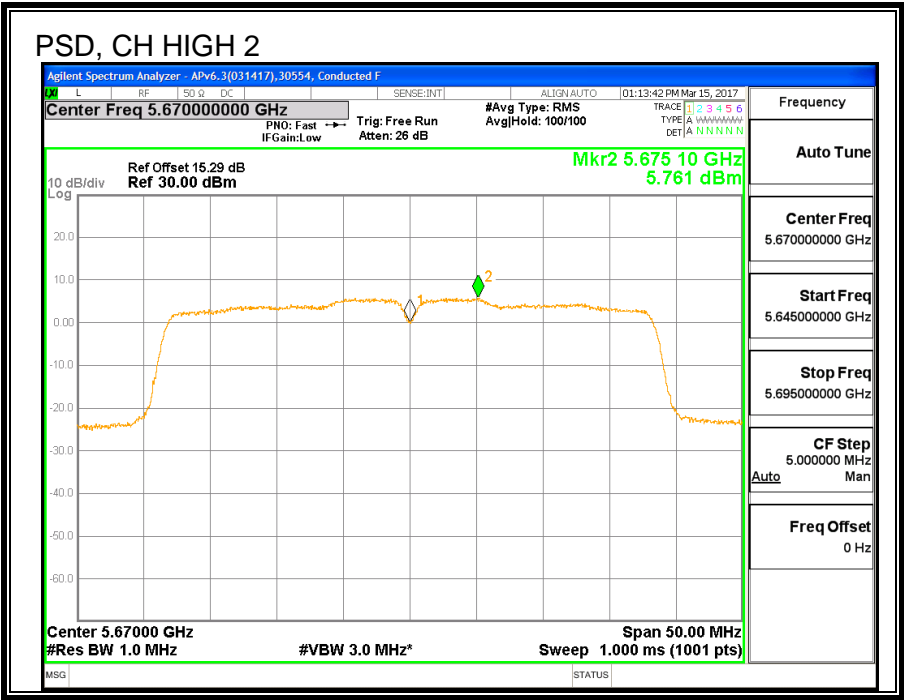
Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5510	15.89	15.89	24.00	-8.11
Mid	5550	18.71	18.71	24.00	-5.29
Mid	5590	19.34	19.34	24.00	-4.66
High 1	5630	18.44	18.44	24.00	-5.56
High 2	5670	17.41	17.41	24.00	-6.59

### PSD Results

Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5510	3.307	3.397	11.00	-7.60
Mid	5550	6.281	6.371	11.00	-4.63
Mid	5590	4.992	5.082	11.00	-5.92
High 1	5630	3.995	4.085	11.00	-6.92
High 2	5670	5.761	5.851	11.00	-5.15







## 8.26. 11ac HT40 UAT 2 SISO STRADDLE CHANNEL 142

### 8.26.1. 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	-0.75	-0.75	24.00	11.00

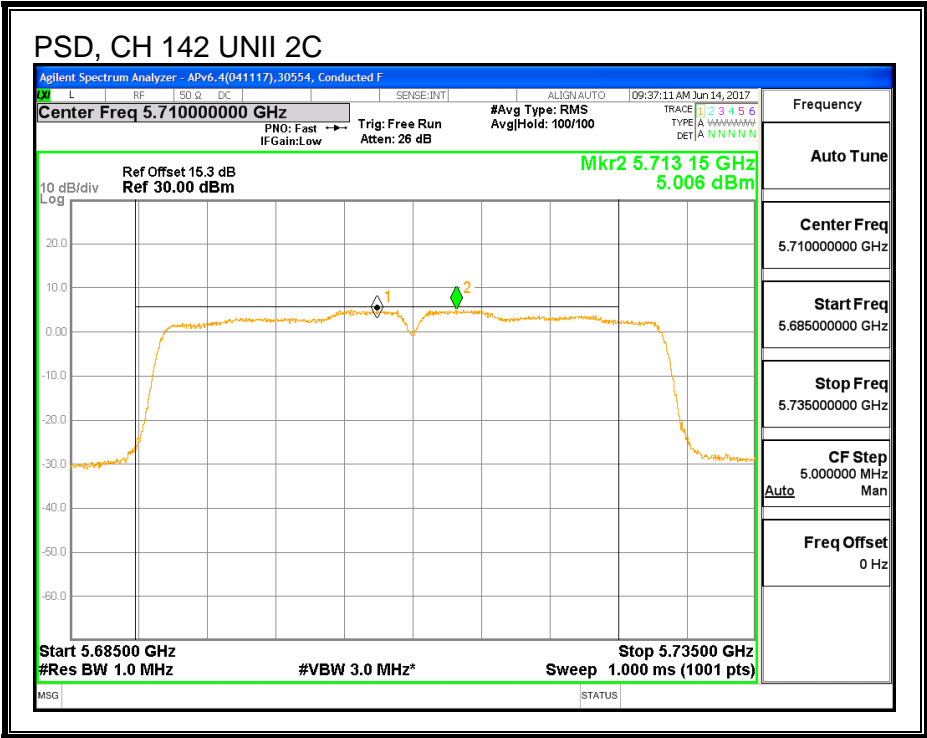
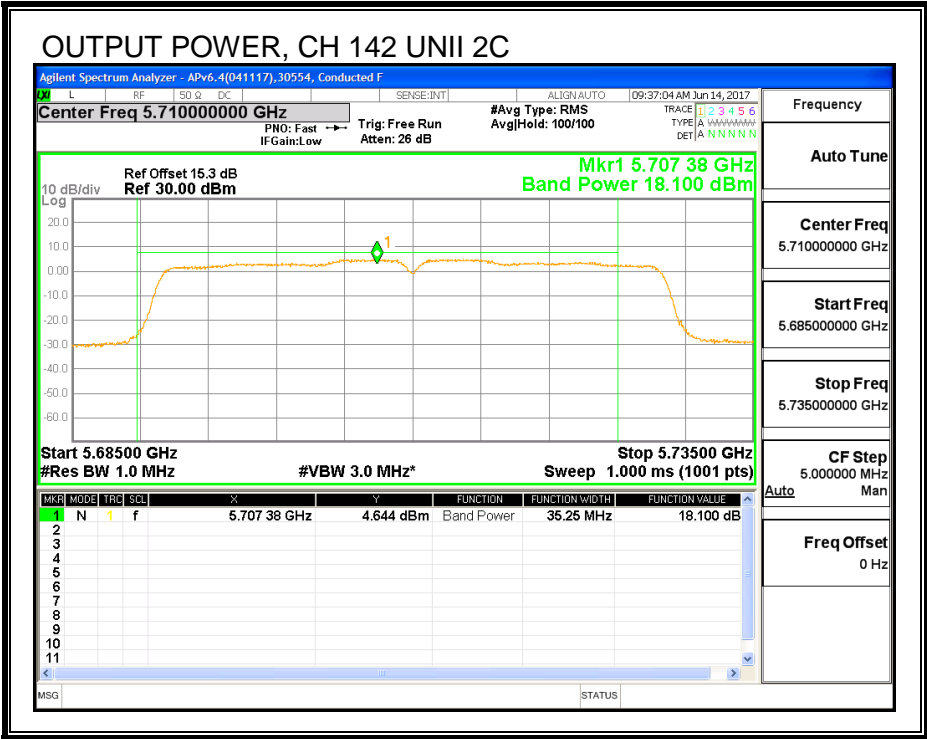
Duty Cycle CF (dB)	0.09	Included in Calculations of Corr'd Power & PSD
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##### Output Power Results

Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
142	5710	18.10	18.19	24.00	-5.81

##### PSD Results

Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
142	5710	5.01	5.10	11.00	-5.90





# **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	0.68	30.00	30.00

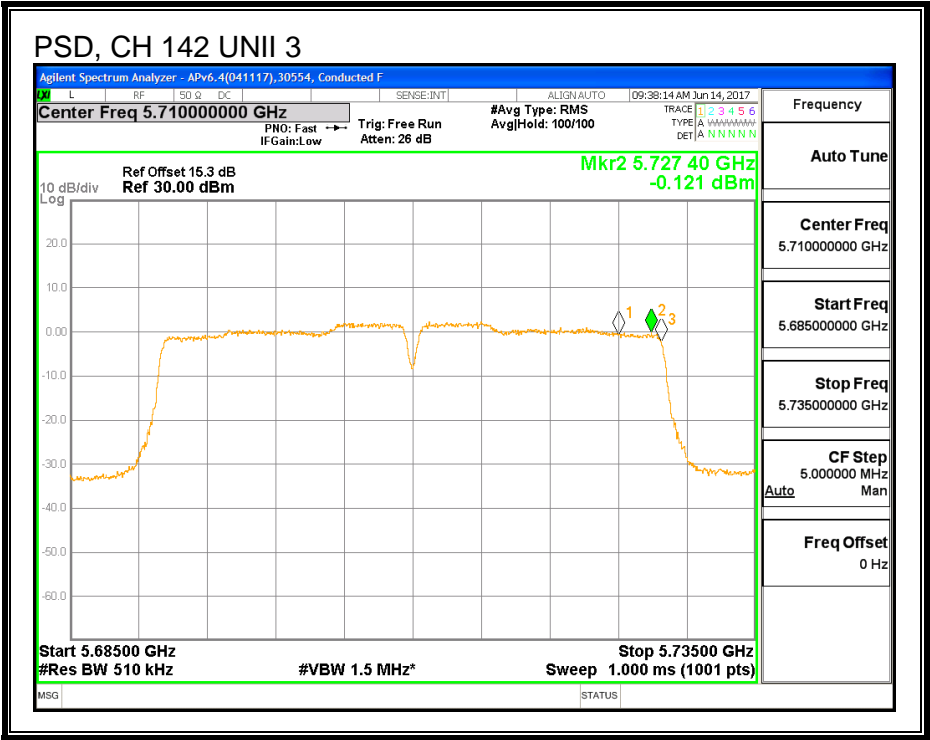
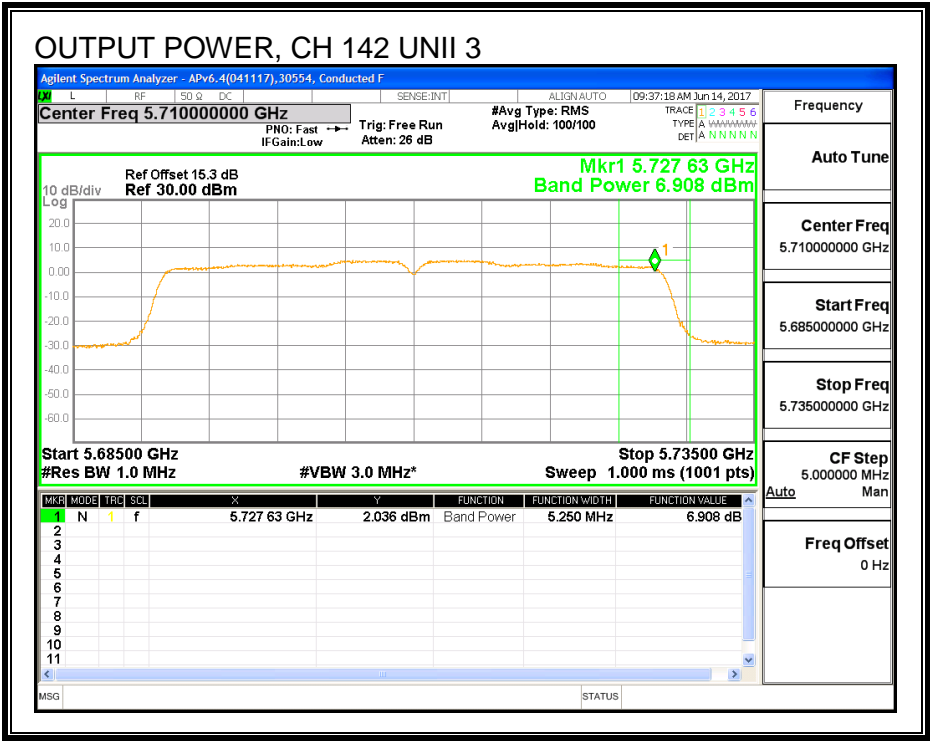
Duty Cycle CF (dB)	0.09	Included in Calculations of Corr'd Power & PSD
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## **Output Power Results**

Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
142	5710	6.91	7.00	30.00	-23.00

## **PSD Results**

Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
142	5710	-0.12	-0.03	30.00	-30.03



8.26.2. 6 dB BANDWIDTH

LIMITS

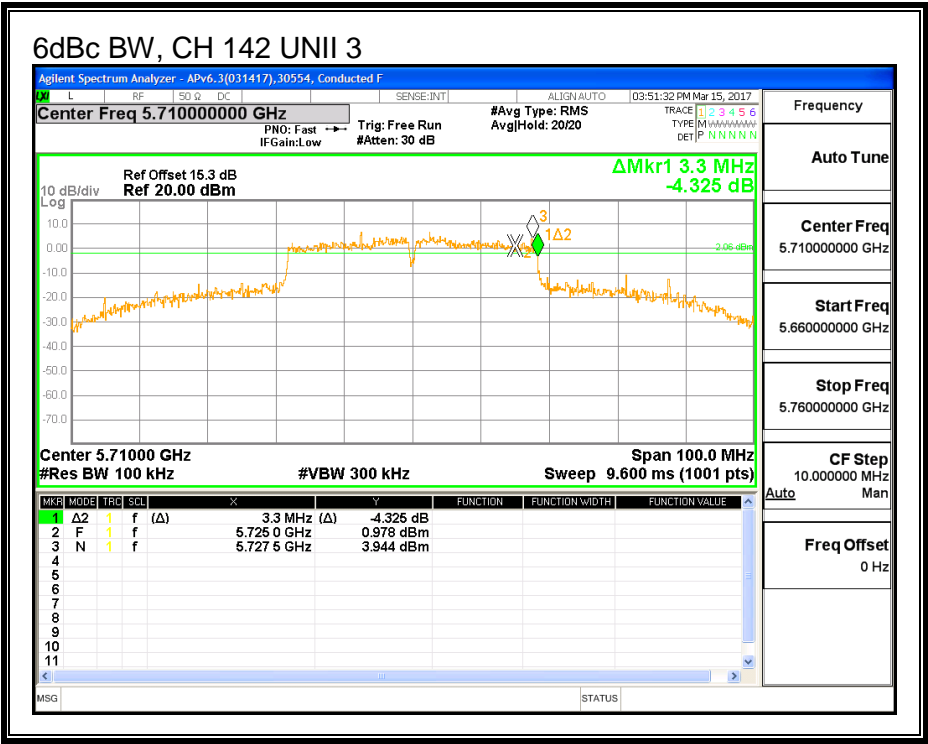
FCC §15.407 (e)

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

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)
High	5710	3.30

6 dB BANDWIDTH



## 8.27. 11n HT40 LAT 3 SISO MODE IN THE 5.6GHz BAND

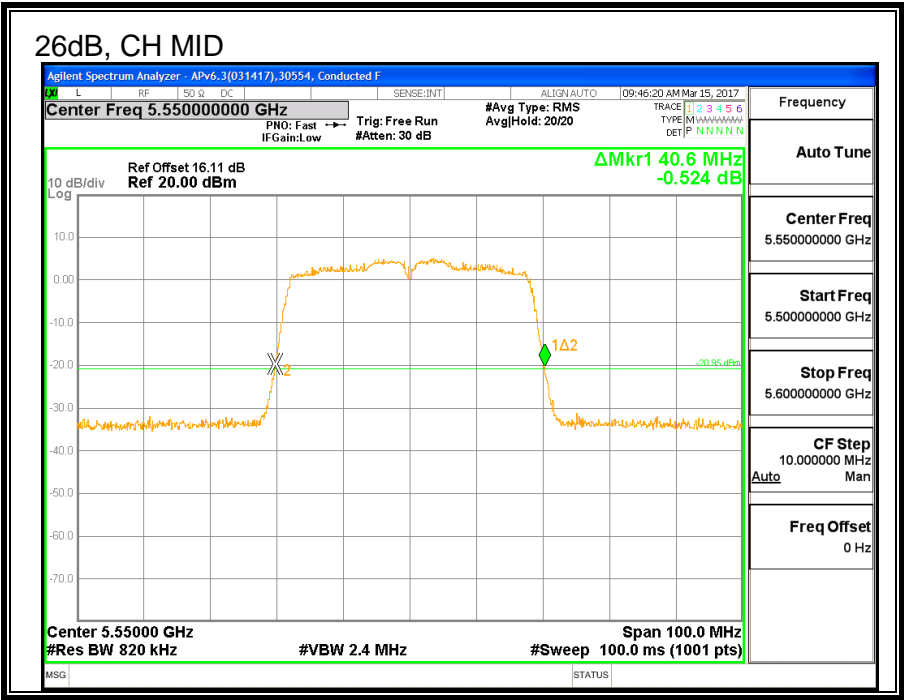
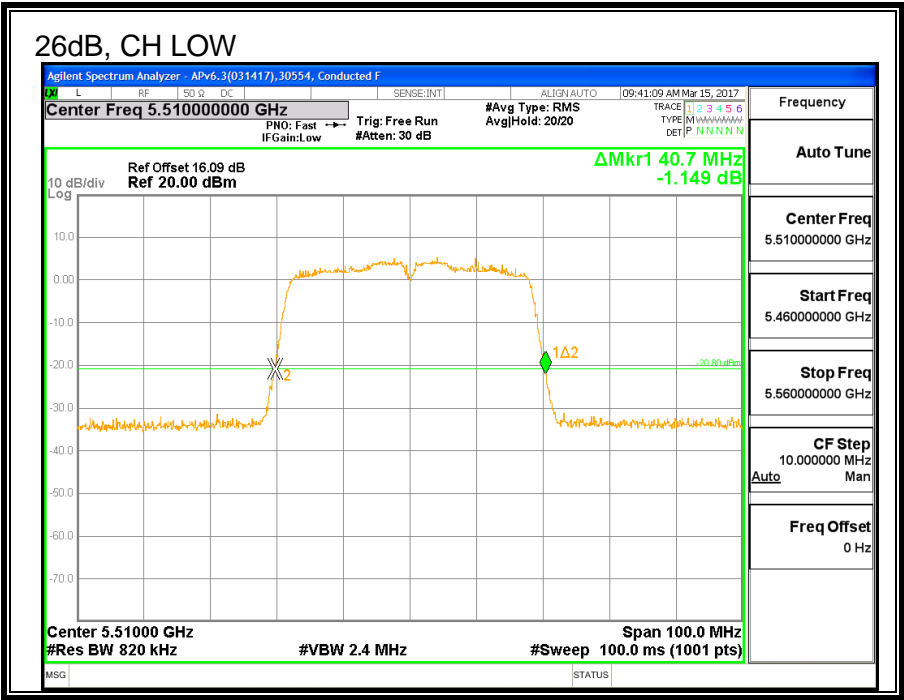
### 8.27.1. 26 dB BANDWIDTH

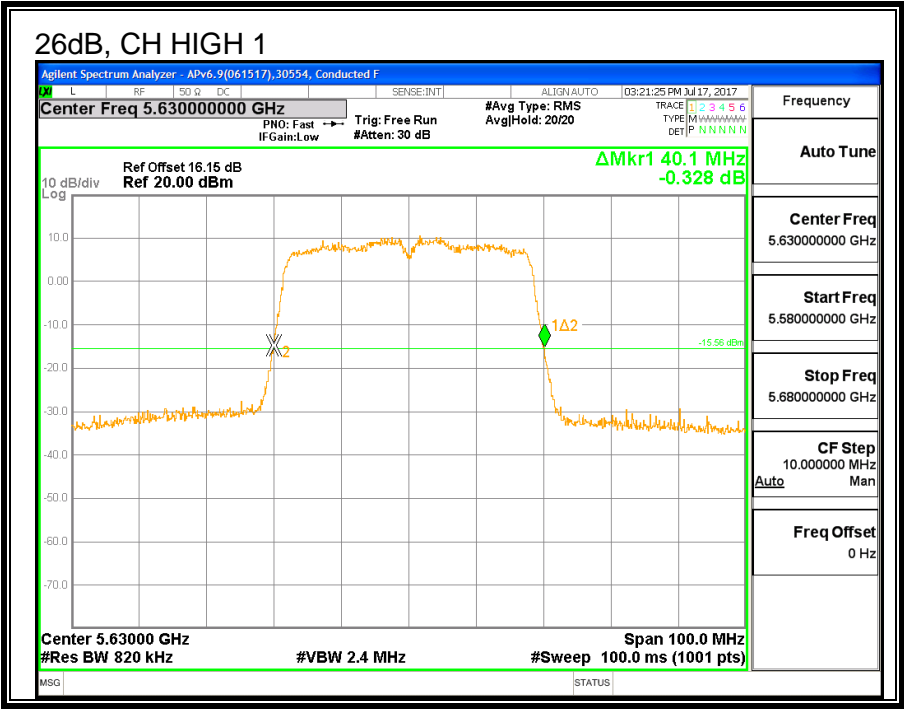
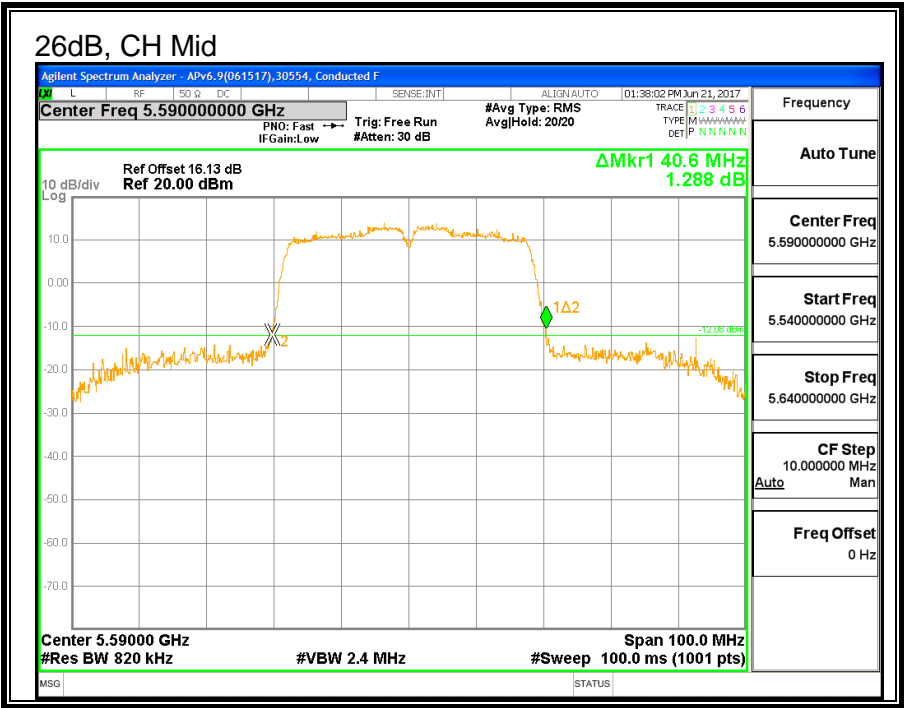
#### LIMITS

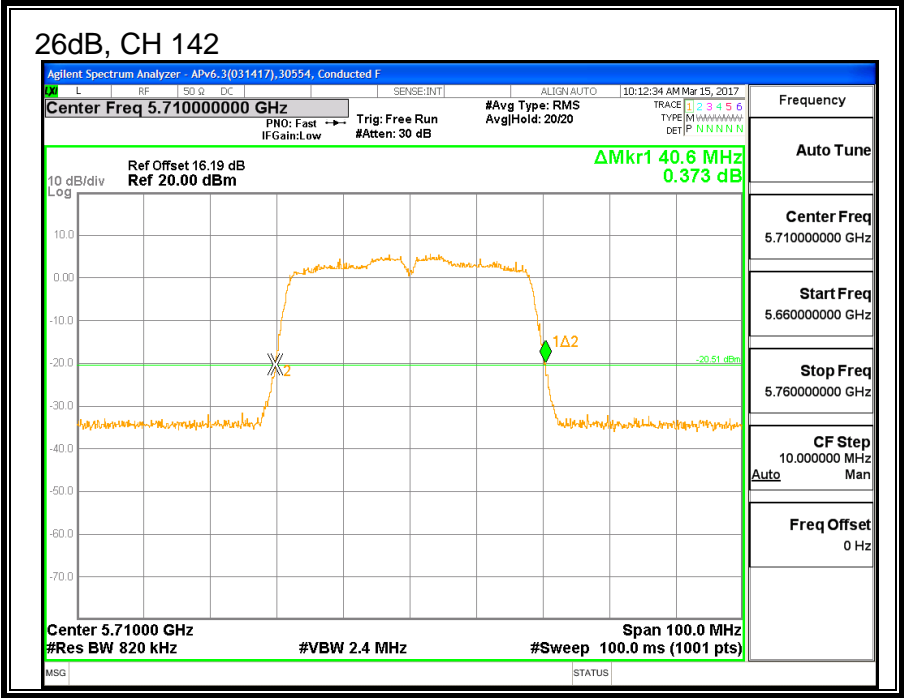
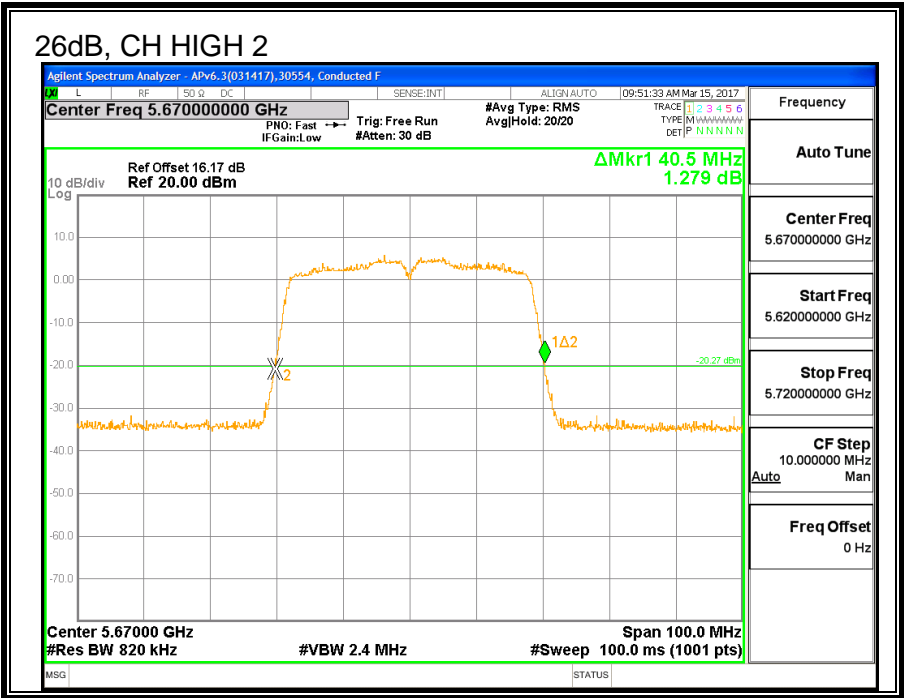
None; for reporting purposes only.

#### RESULTS

Channel	Frequency	26 dB BW LAT 3 (MHz)
Low	5510	40.7
Mid	5550	40.6
Mid	5590	40.6
High 1	5630	40.1
High 2	5670	40.5
142	5710	40.6







## 8.27.2. 99% BANDWIDTH

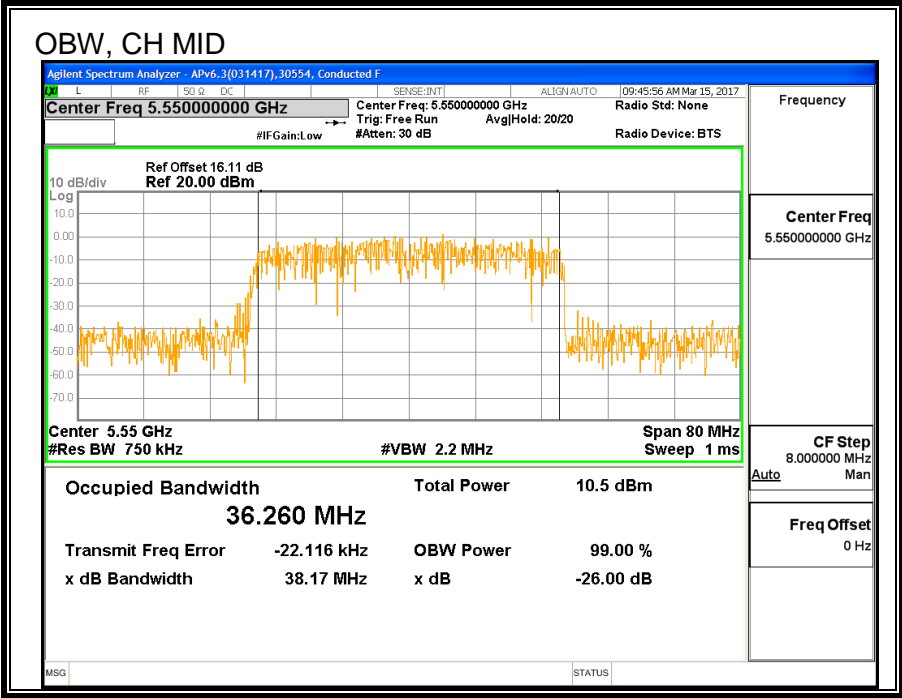
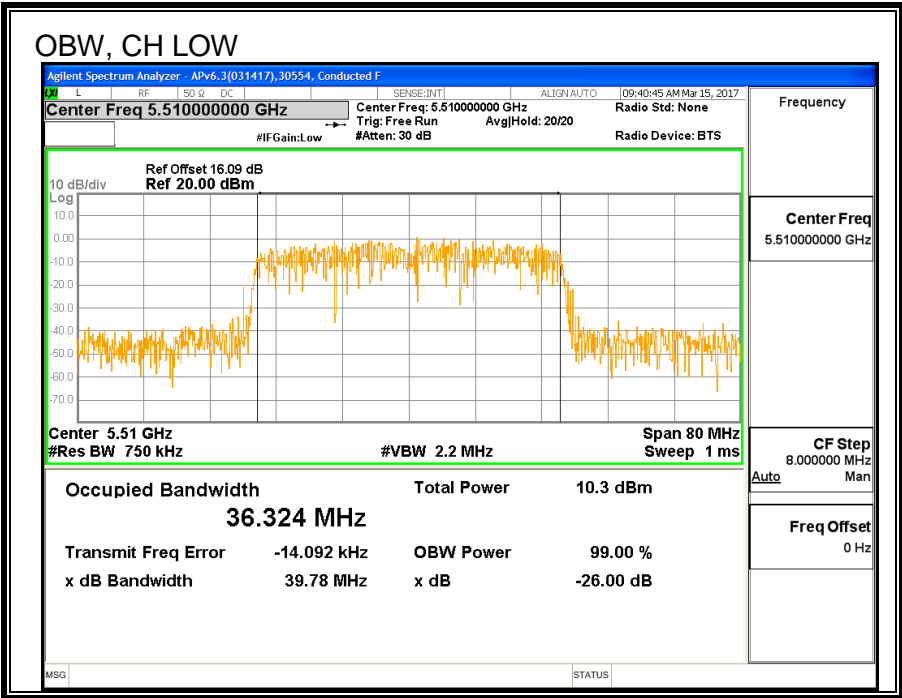
### LIMITS

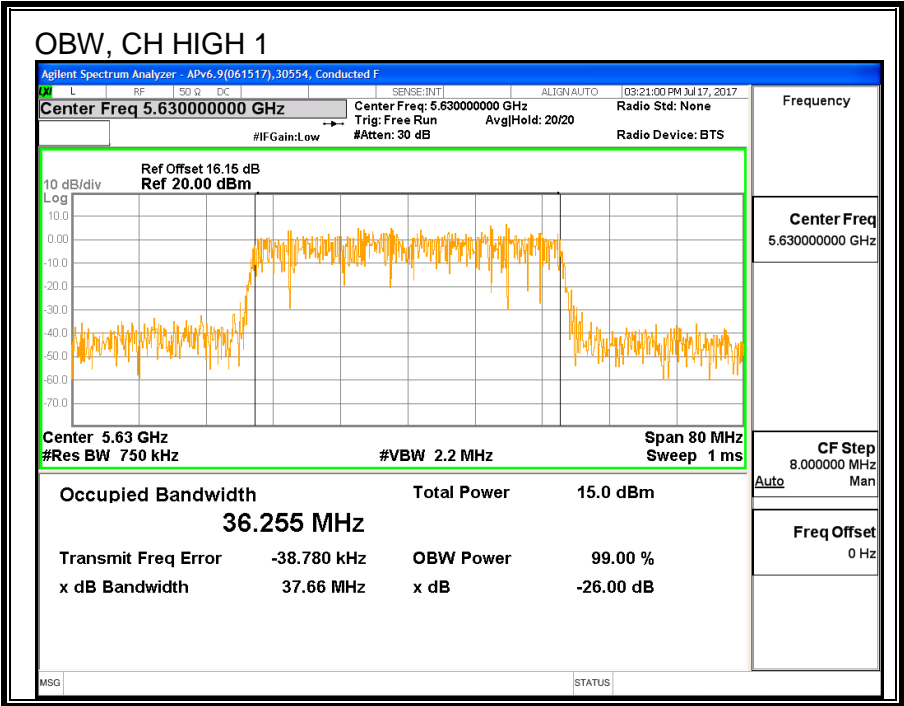
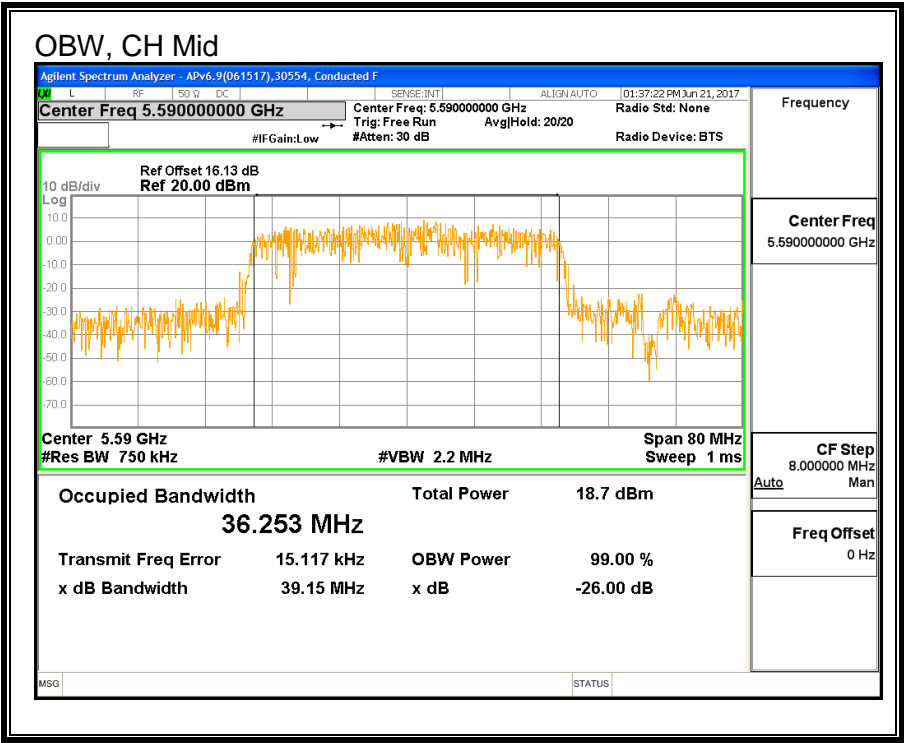
None; for reporting purposes only.

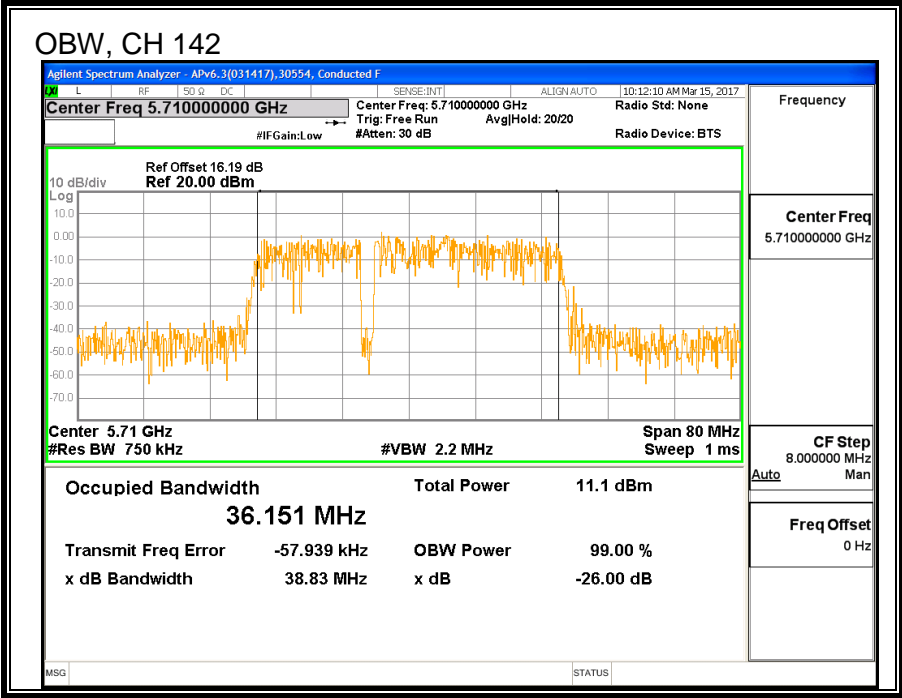
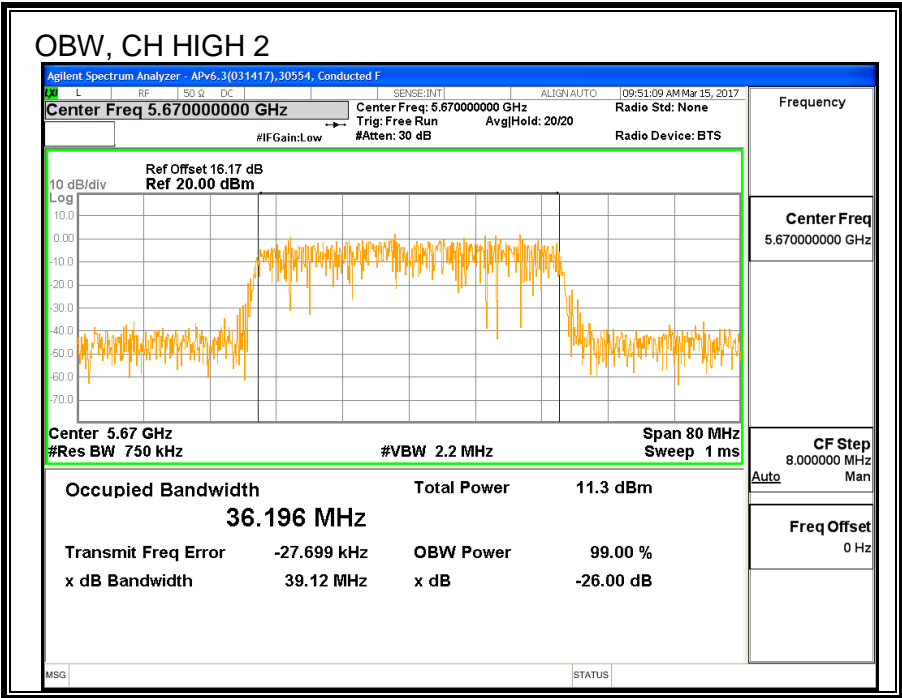
### RESULTS

Channel	Frequency	99% BW LAT 3 (MHz)
Low	5510	36.324
Mid	5550	36.260
Mid	5590	36.253
High 1	5630	36.255
High 2	5670	36.196
142	5710	36.151









### 8.27.3. AVERAGE POWER

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#### 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	5510	15.87
Mid	5550	18.71
Mid	5590	19.21
High 1	5630	18.41
High 2	5670	17.43
142	5710	19.32

## **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  $11 \text{ dBm} + 10 \log B$ , 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.

PSD test procedure: KDB 789033 D02 v01r04 Section F (SA-2 method)

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	5510	40.70	36.32	-0.96	24.00	11.00
Mid	5550	40.60	36.26	-0.96	24.00	11.00
Mid	5590	40.60	36.25	-0.96	24.00	11.00
High 1	5630	40.10	36.26	-0.96	24.00	11.00
High 2	5670	40.50	36.20	-0.96	24.00	11.00

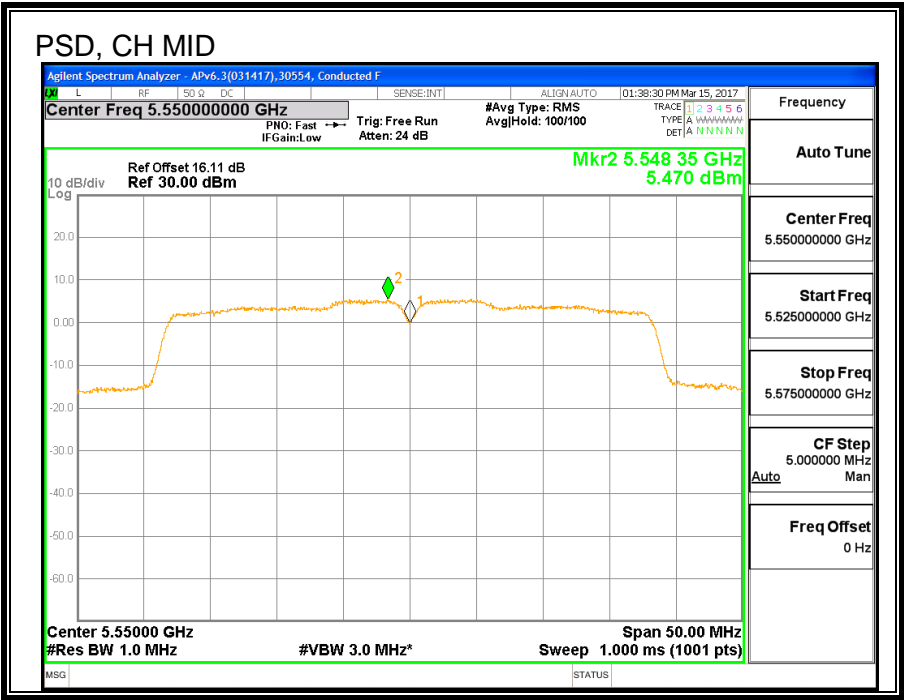
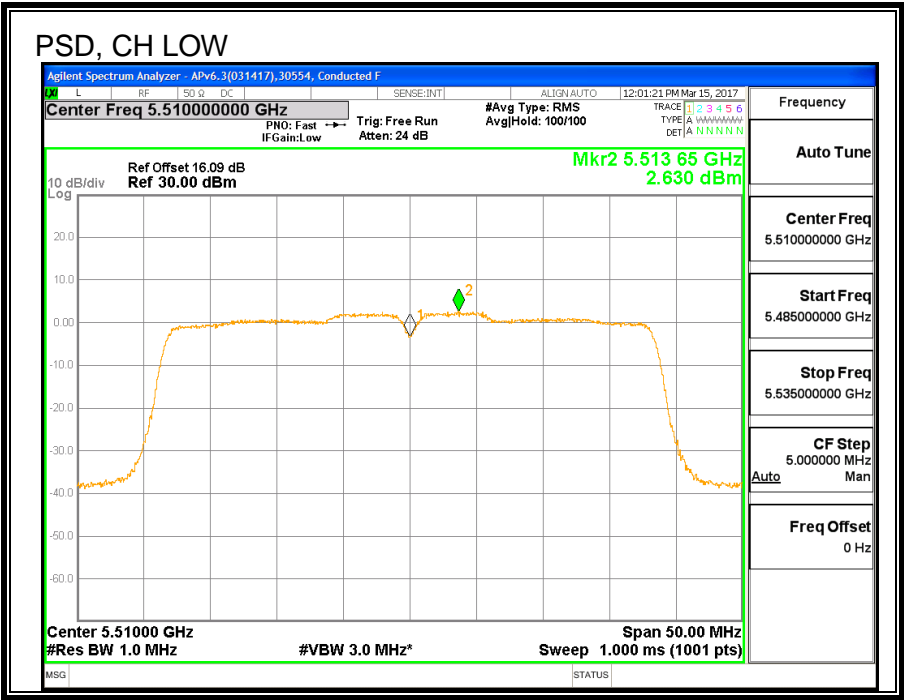
Duty Cycle CF (dB)	0.09	Included in Calculations of Corr'd PSD
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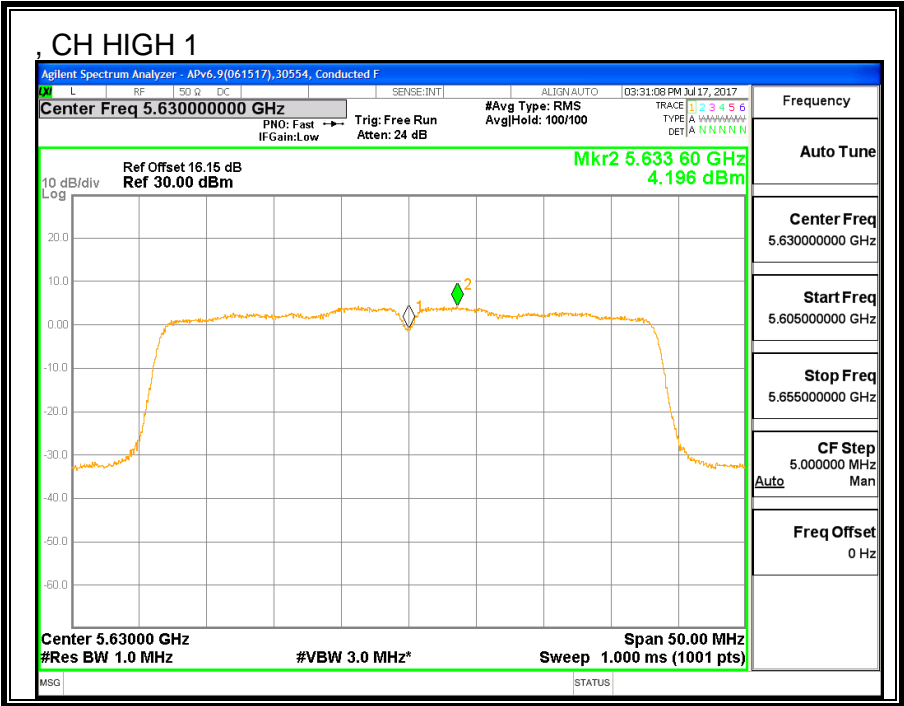
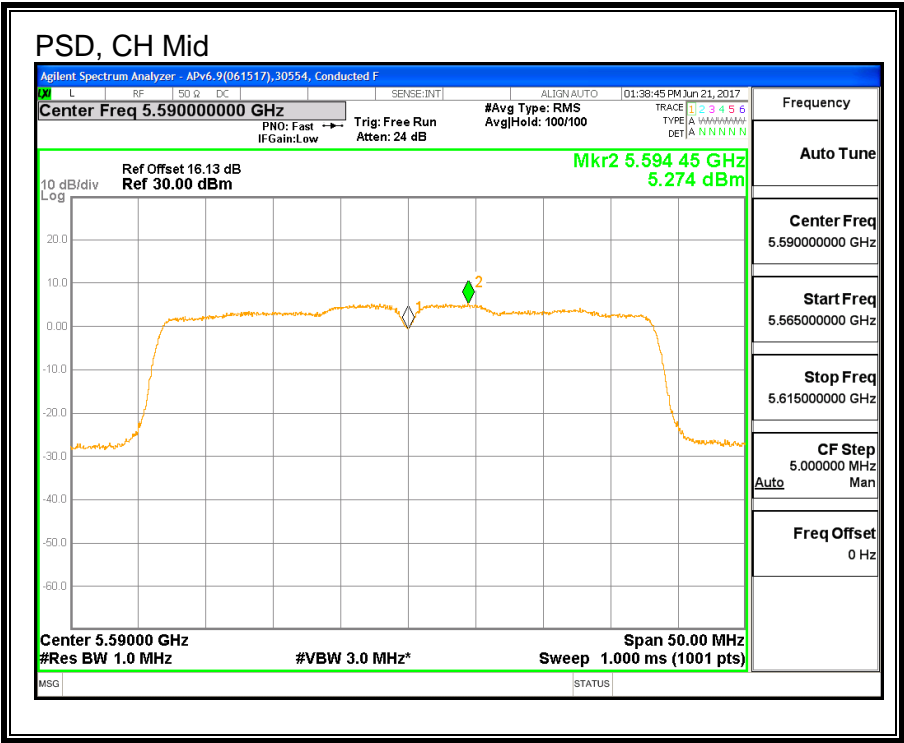
### Output Power Results

Channel	Frequency (MHz)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5510	15.87	15.87	24.00	-8.13
Mid	5550	18.71	18.71	24.00	-5.29
Mid	5590	19.21	19.21	24.00	-4.79
High 1	5630	18.41	18.41	24.00	-5.59
High 2	5670	17.43	17.43	24.00	-6.57

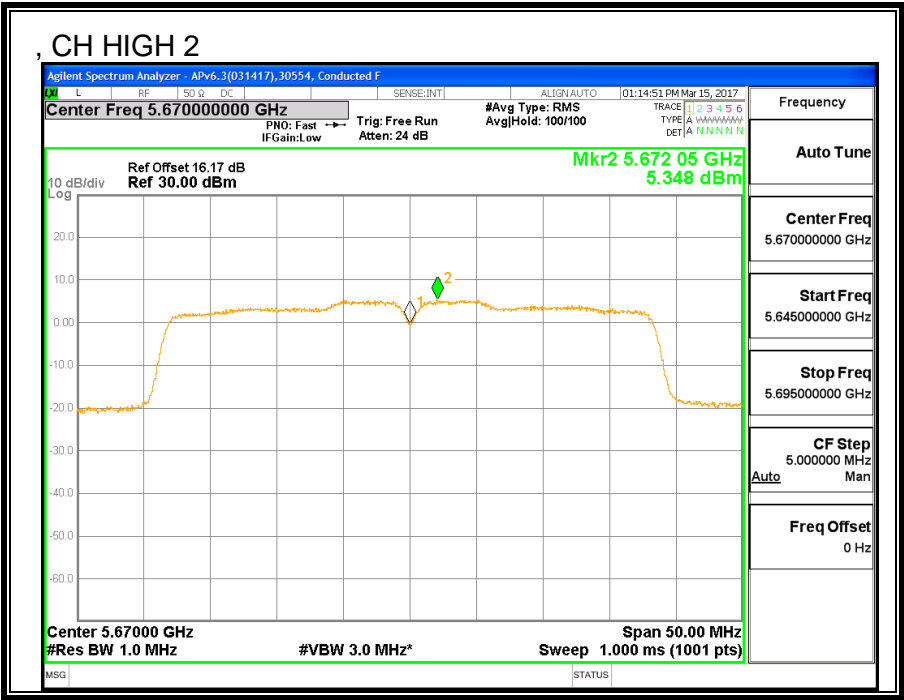
### PSD Results

Channel	Frequency (MHz)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5510	2.630	2.720	11.00	-8.28
Mid	5550	5.470	5.560	11.00	-5.44
Mid	5590	5.274	5.364	11.00	-5.64
High 1	5630	4.196	4.286	11.00	-6.71
High 2	5670	5.348	5.438	11.00	-5.56









## 8.28. 11ac HT40 LAT 3 SISO STRADDLE CHANNEL 142

### 8.28.1. 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	35.30	-0.96	-0.96	24.00	11.00

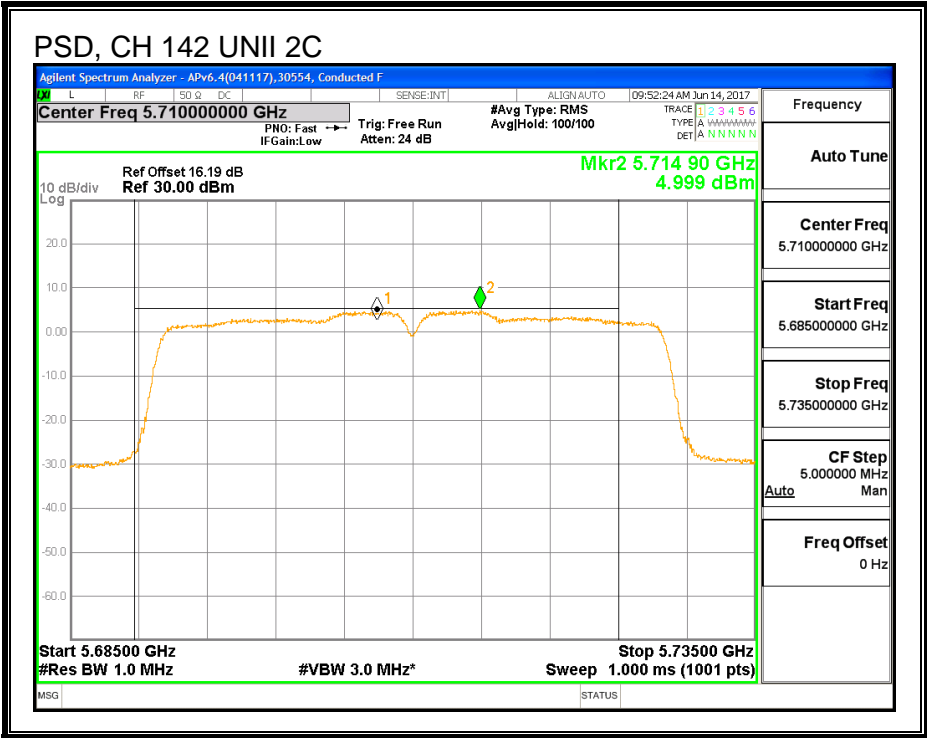
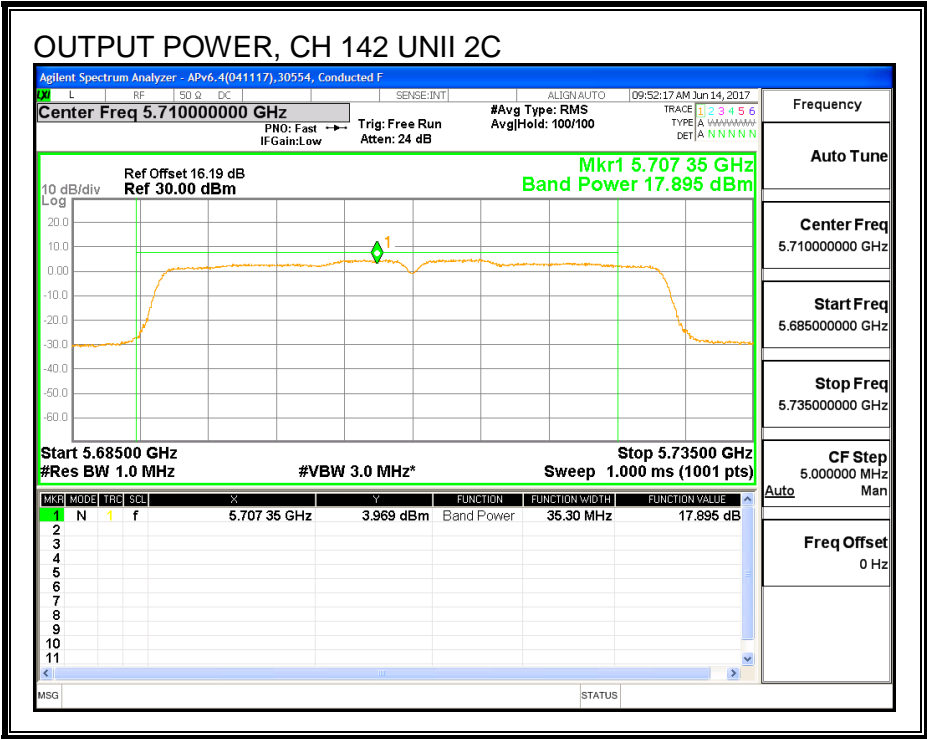
Duty Cycle CF (dB)	0.09	Included in Calculations of Corr'd Power & PSD
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##### Output Power Results

Channel	Frequency (MHz)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
142	5710	17.90	17.99	24.00	-6.02

##### PSD Results

Channel	Frequency (MHz)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
142	5710	5.00	5.09	11.00	-5.91



**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	5.30	-0.93	30.00	30.00

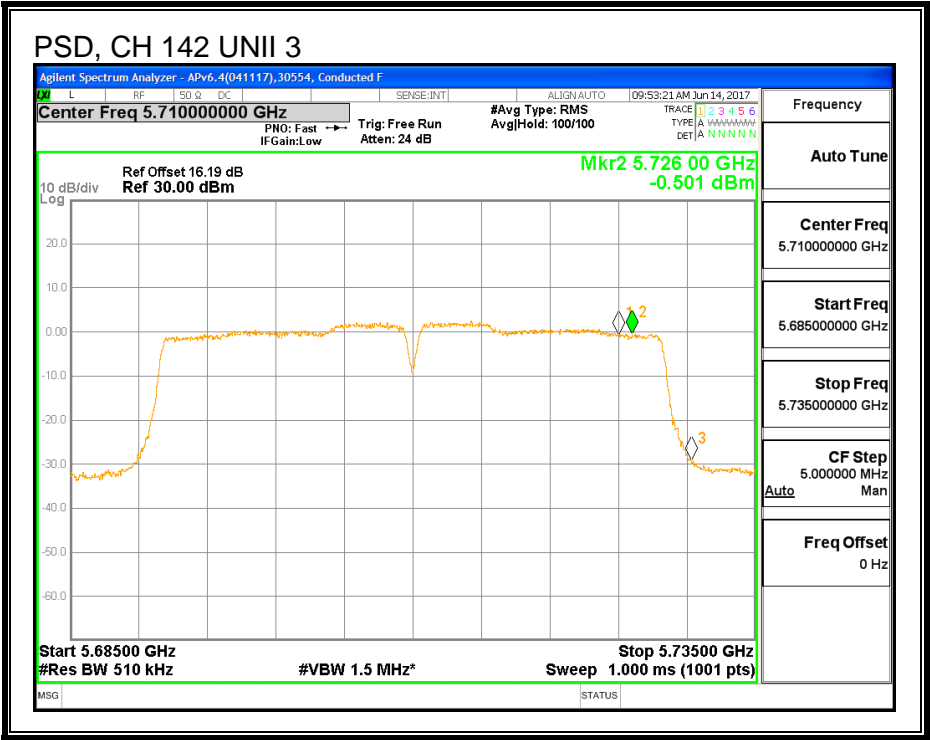
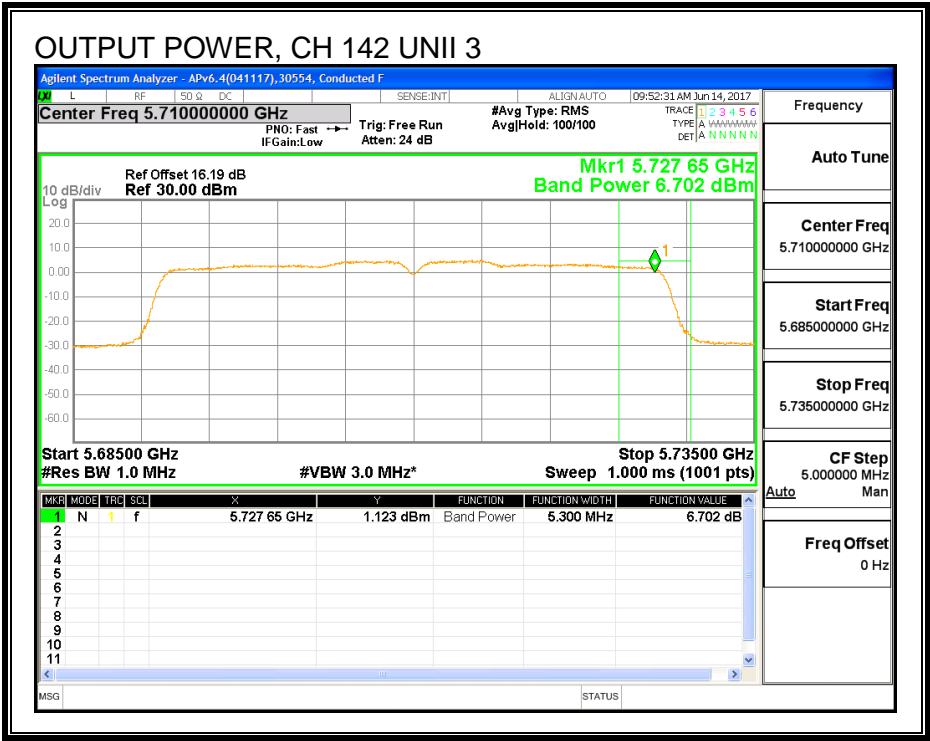
Duty Cycle CF (dB)	0.09	Included in Calculations of Corr'd Power & PSD
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**Output Power Results**

Channel	Frequency (MHz)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
142	5710	6.70	6.79	30.00	-23.21

**PSD Results**

Channel	Frequency (MHz)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
142	5710	-0.50	-0.41	30.00	-30.41



8.28.2. 6 dB BANDWIDTH

LIMITS

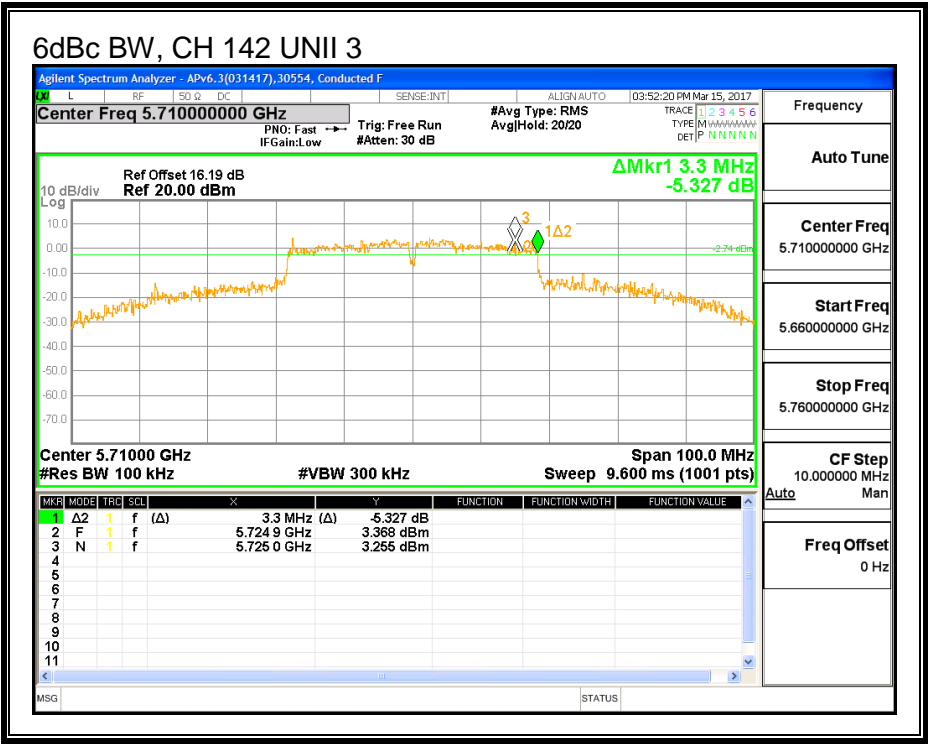
FCC §15.407 (e)

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

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)
High	5710	3.30

6 dB BANDWIDTH



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

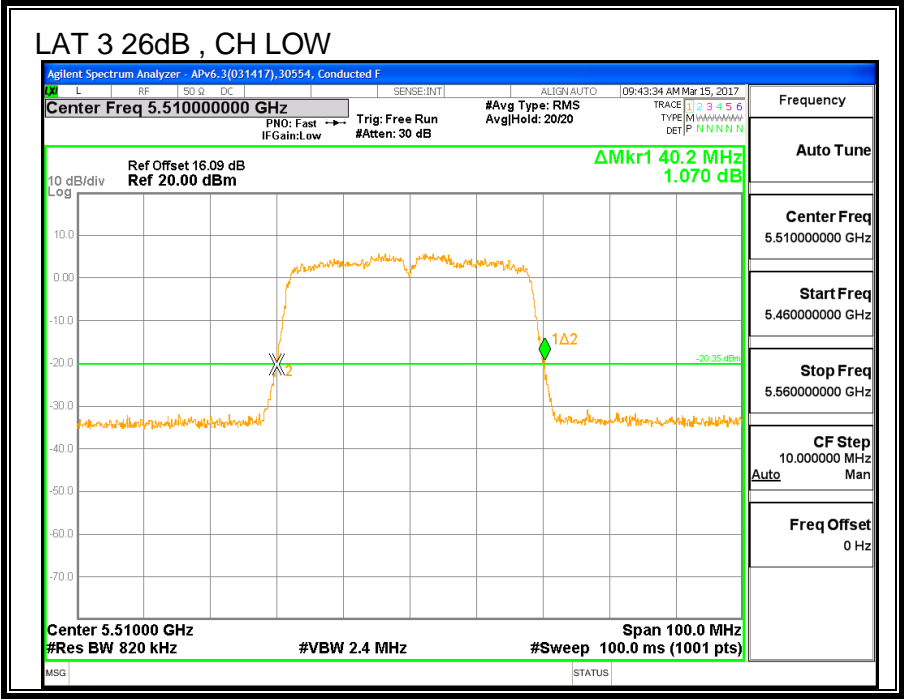
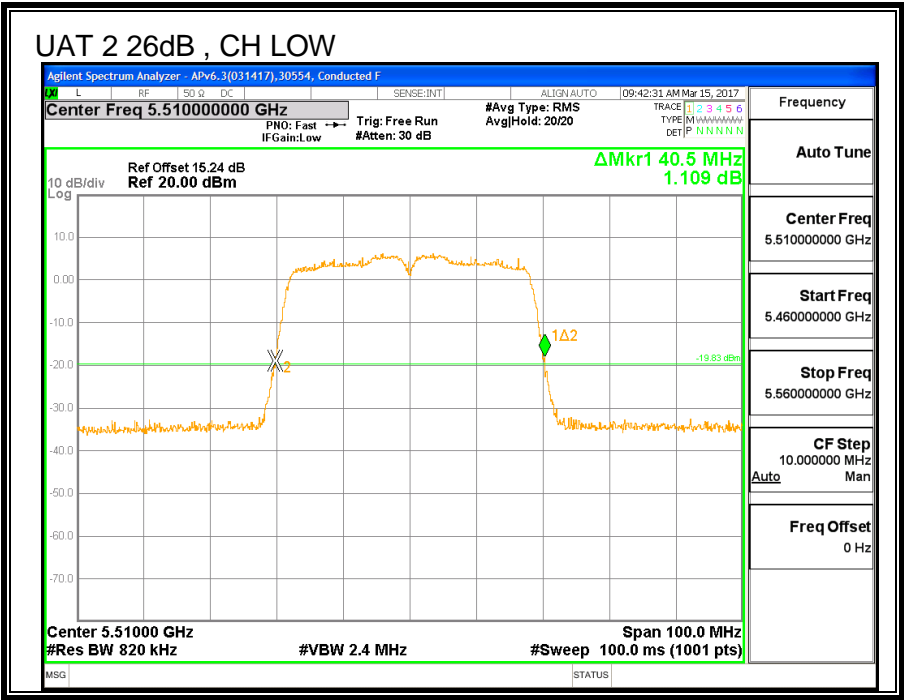
### 8.29.1. 26 dB BANDWIDTH

#### LIMITS

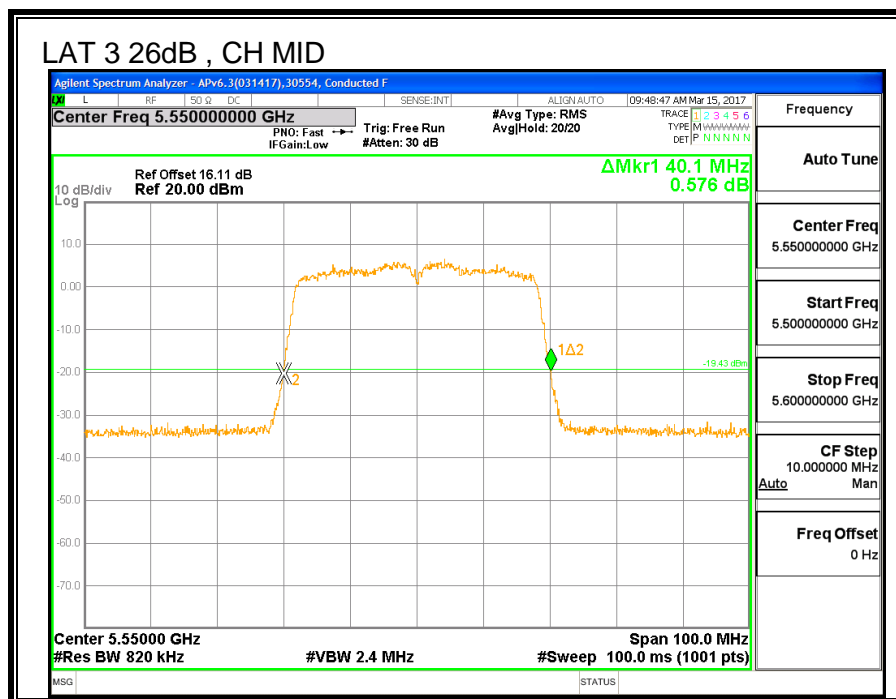
None; for reporting purposes only.

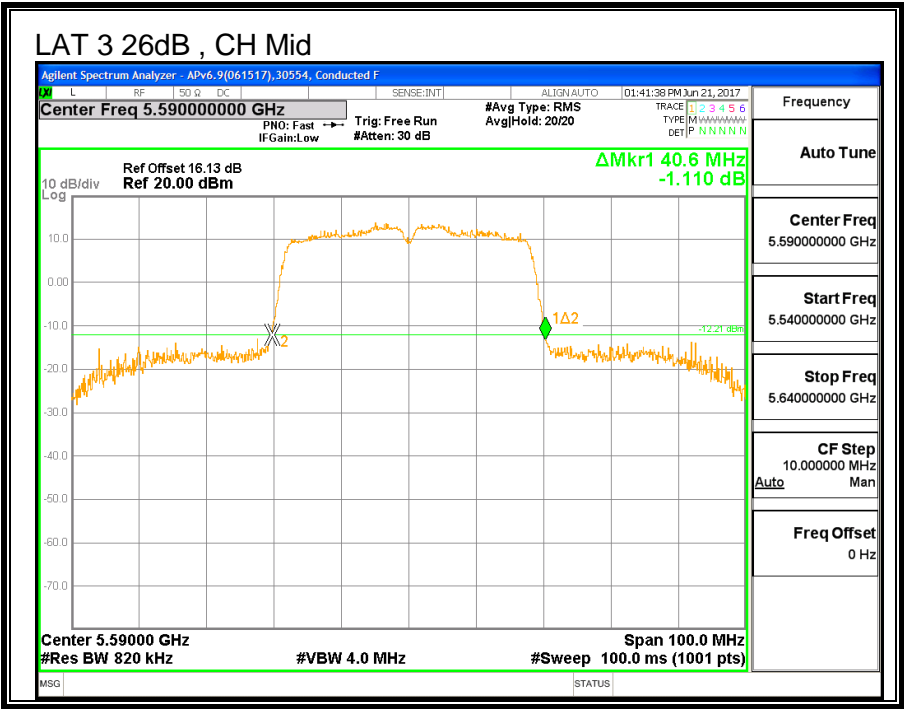
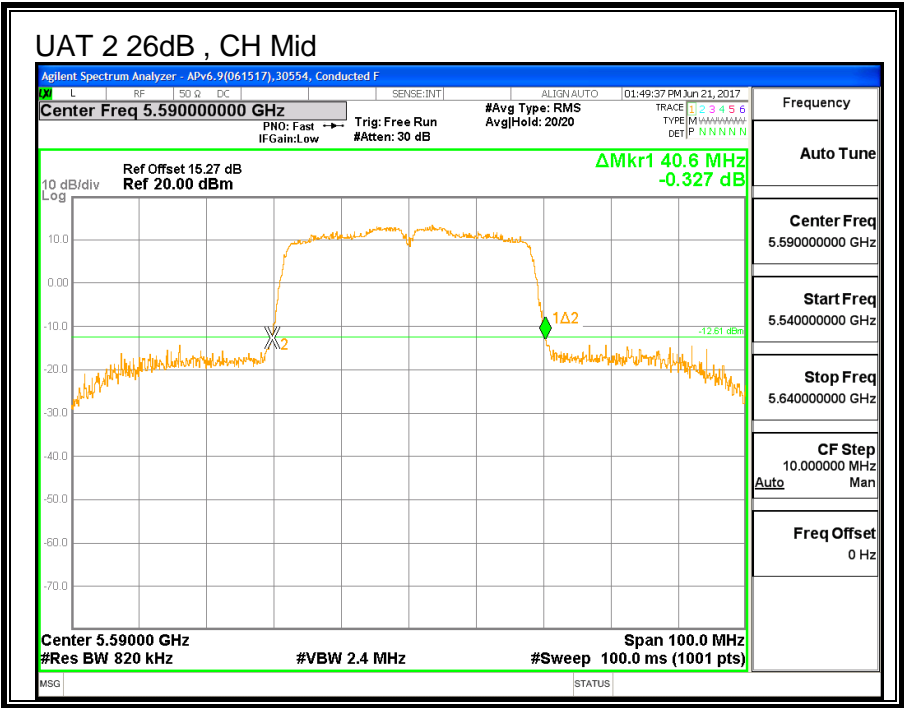
#### RESULTS

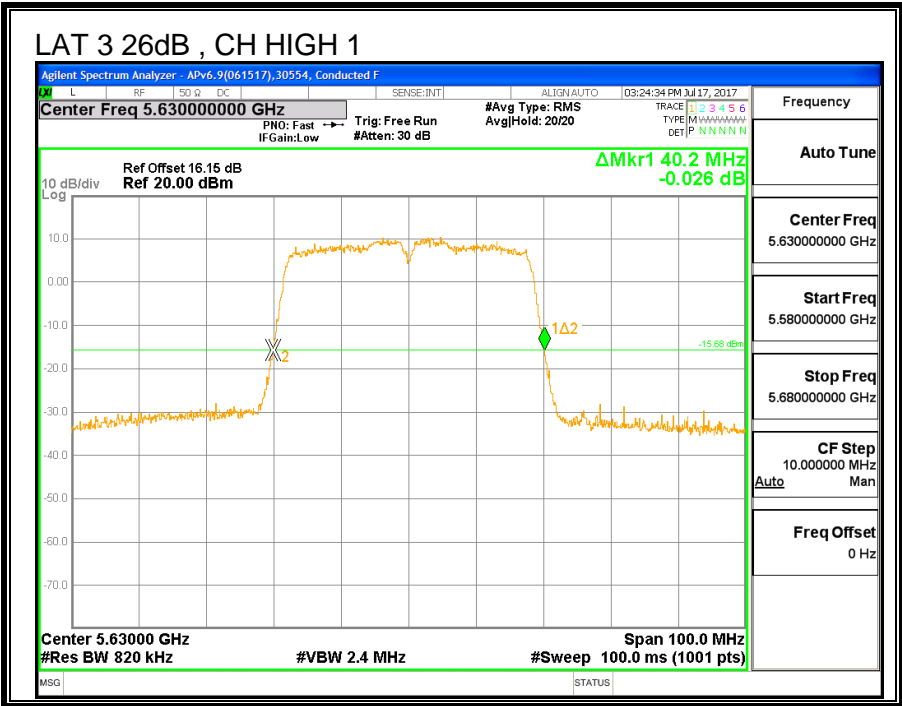
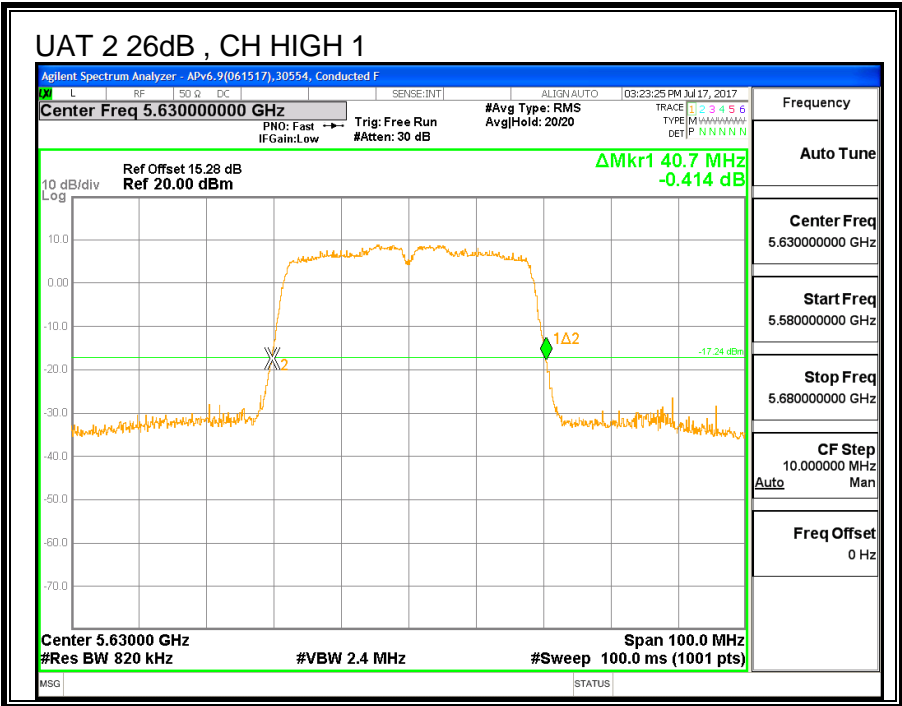
Channel	Frequency	26 dB BW UAT 2 (MHz)	26 dB BW LAT 3 (MHz)
Low	5510	40.5	40.2
Mid	5550	40.5	40.1
Mid	5590	40.6	40.6
High 1	5630	40.7	40.2
High 2	5670	40.6	40.1
142	5710	40.5	40.0

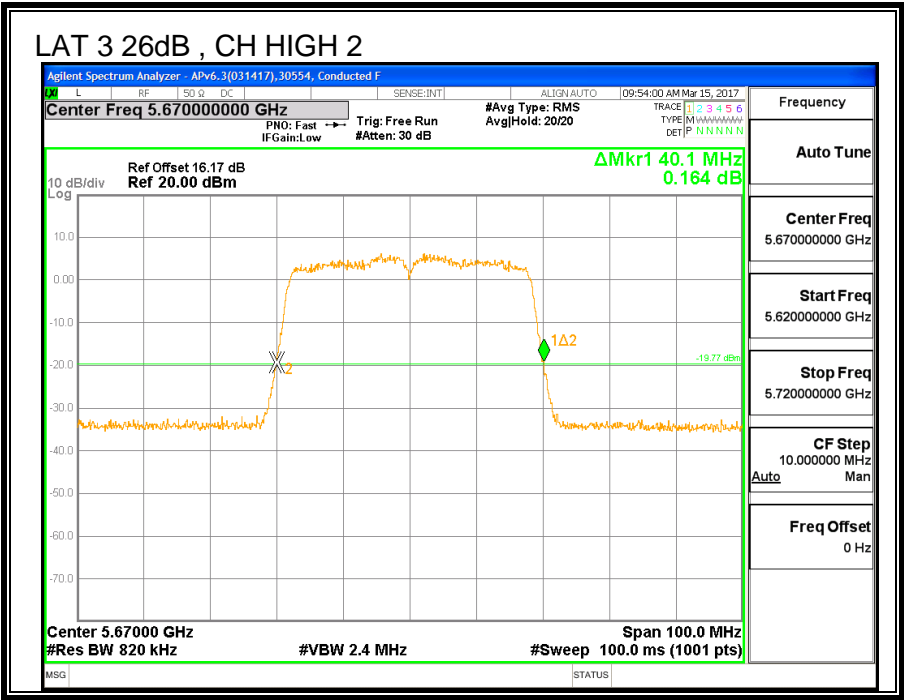
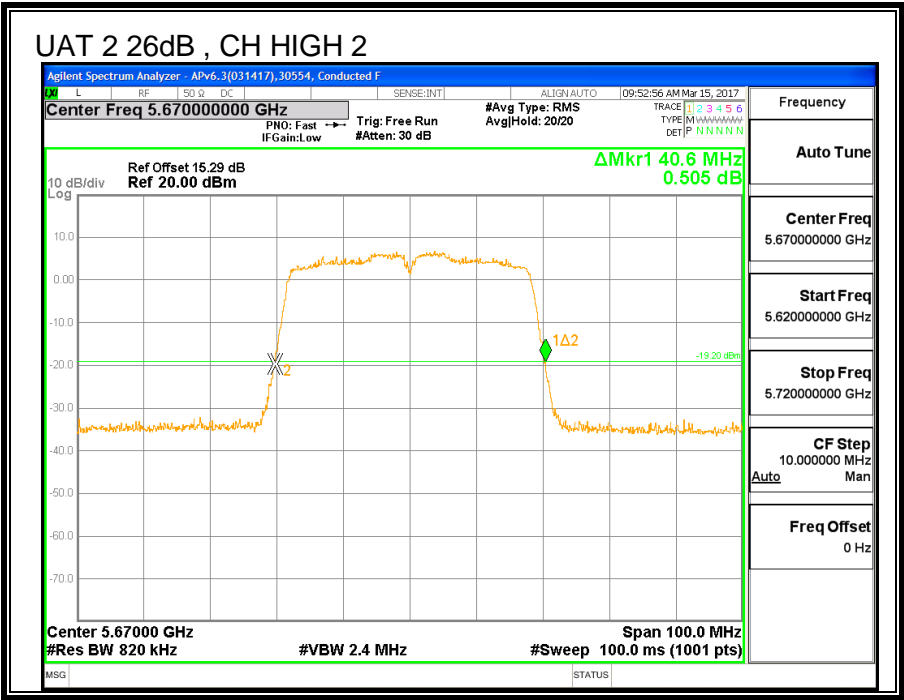


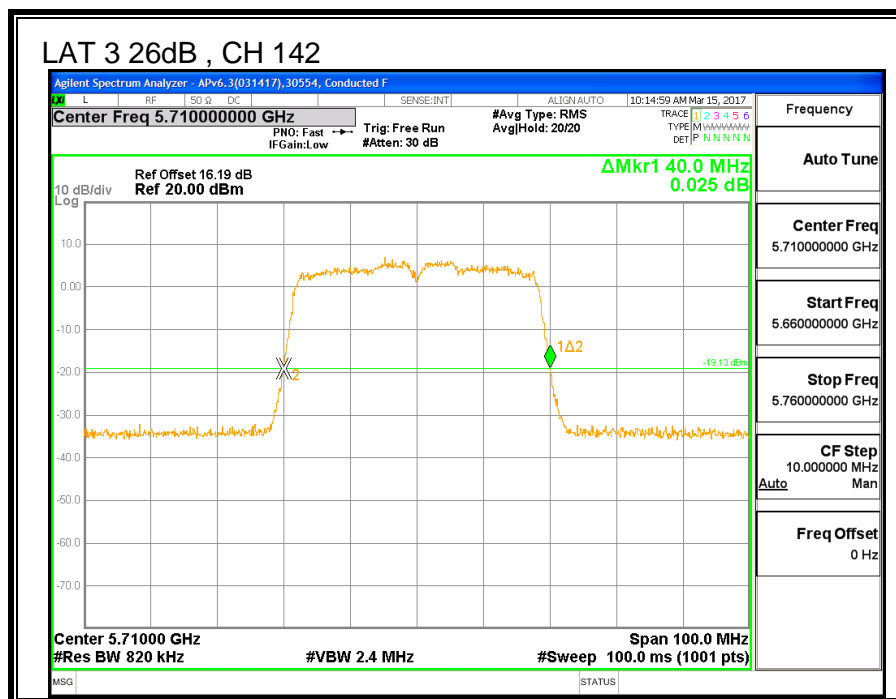












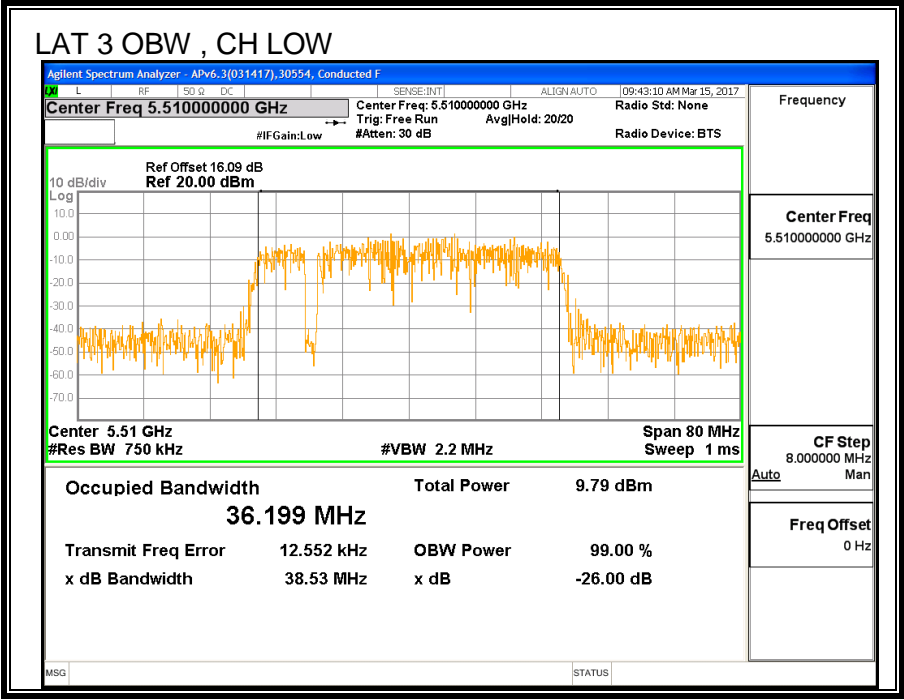
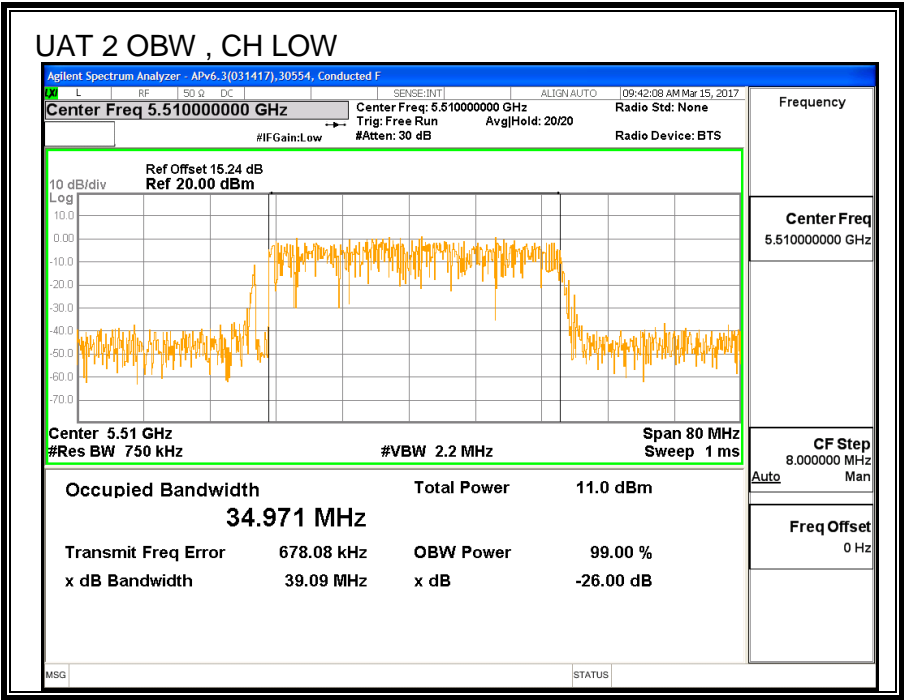
## 8.29.2. 99% BANDWIDTH

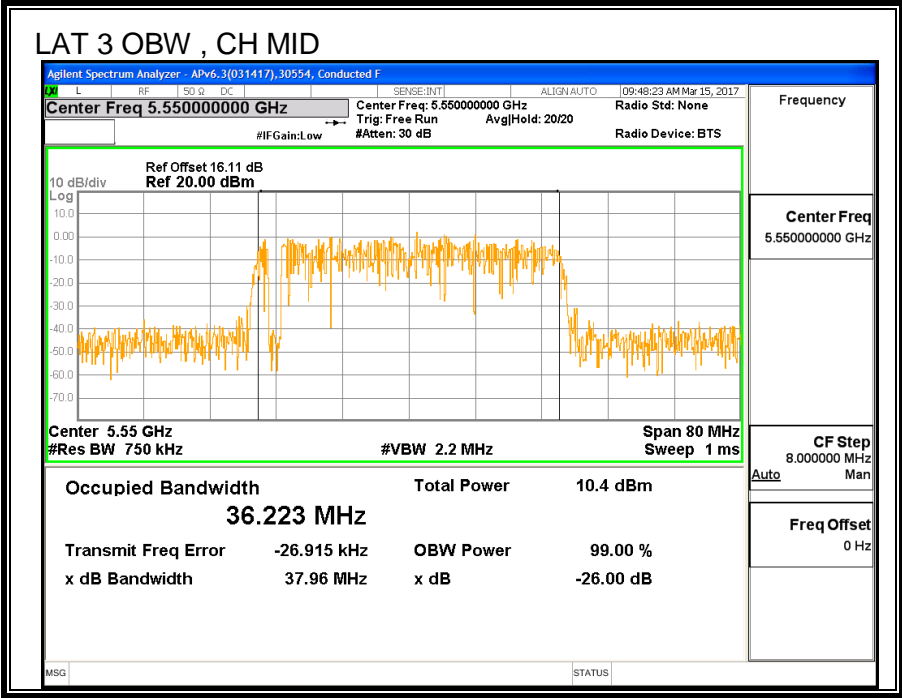
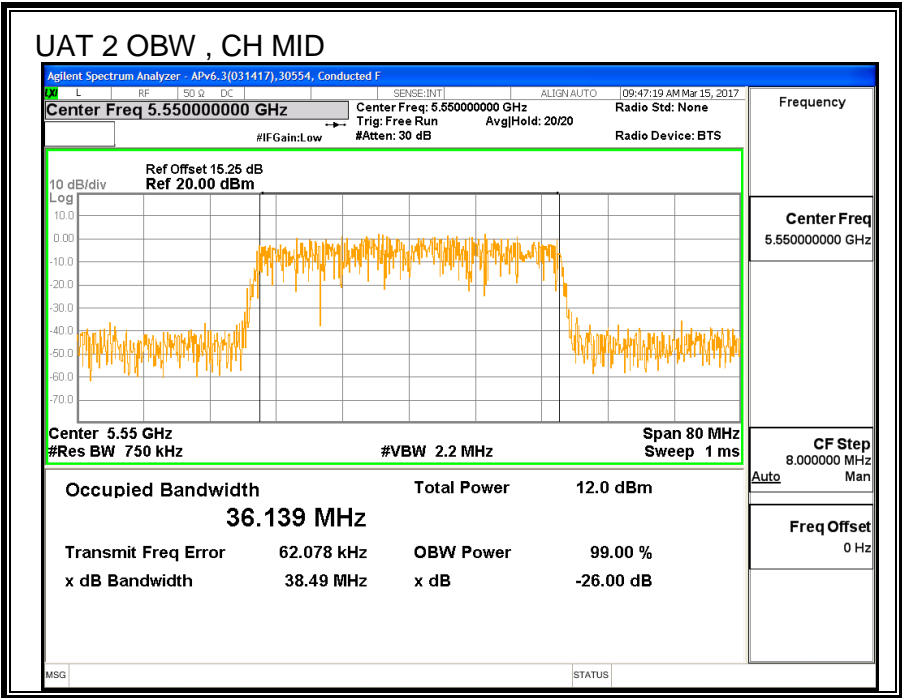
### LIMITS

None; for reporting purposes only.

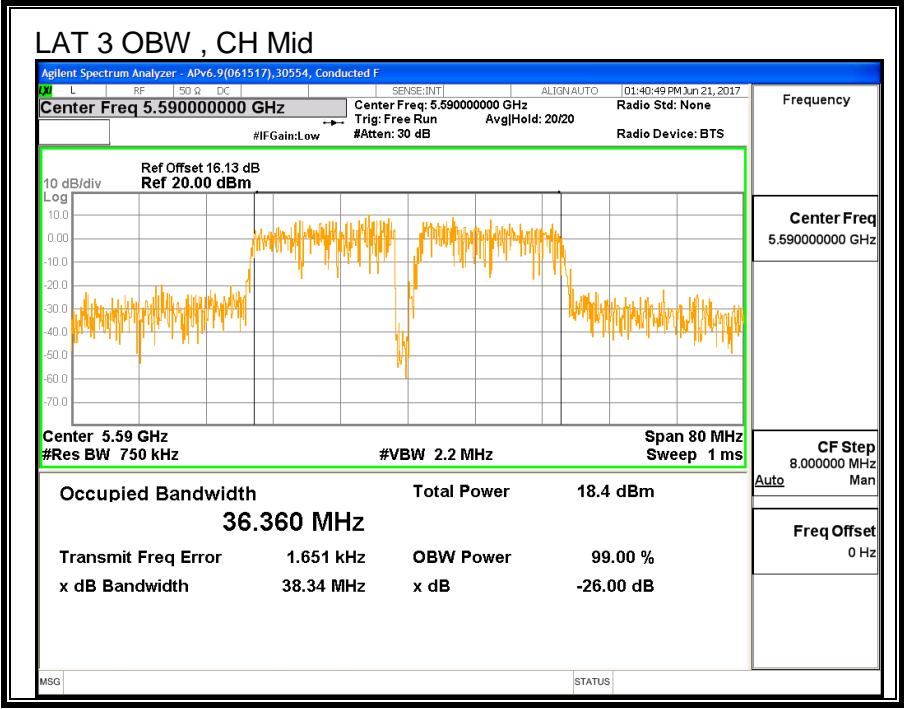
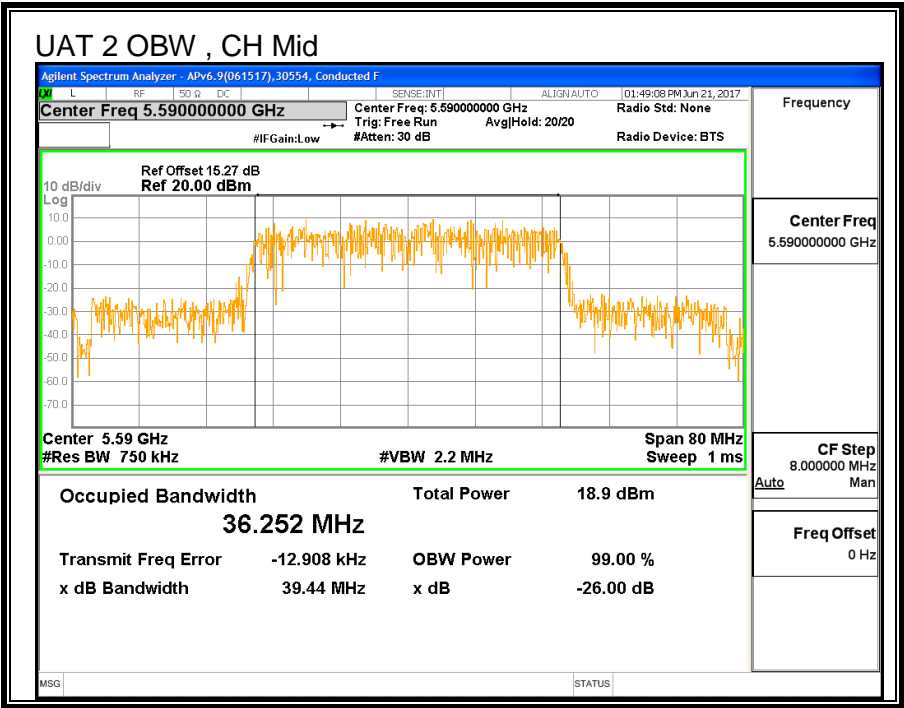
### RESULTS

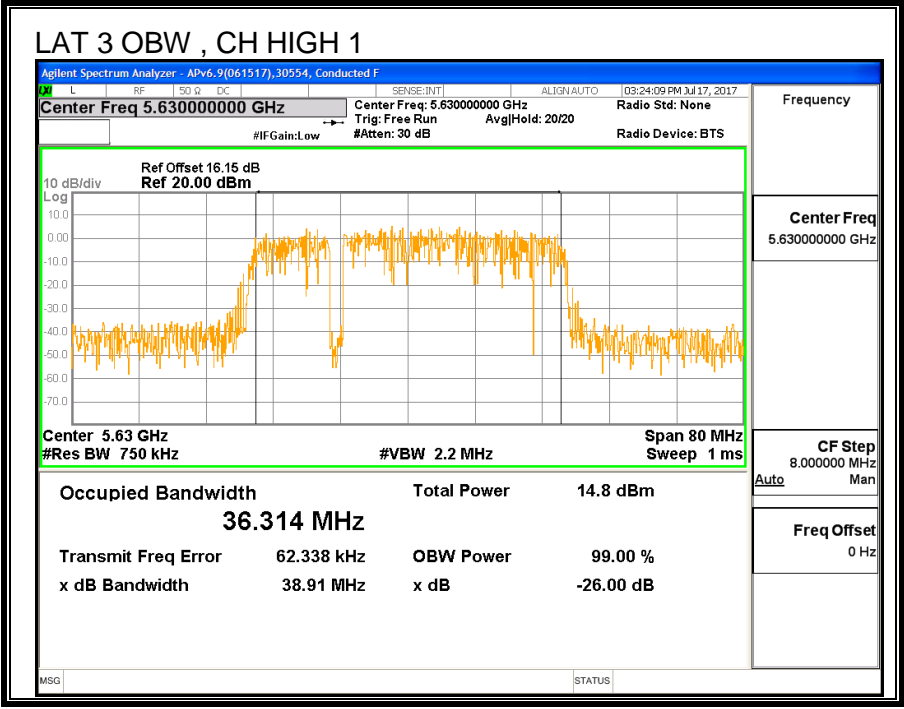
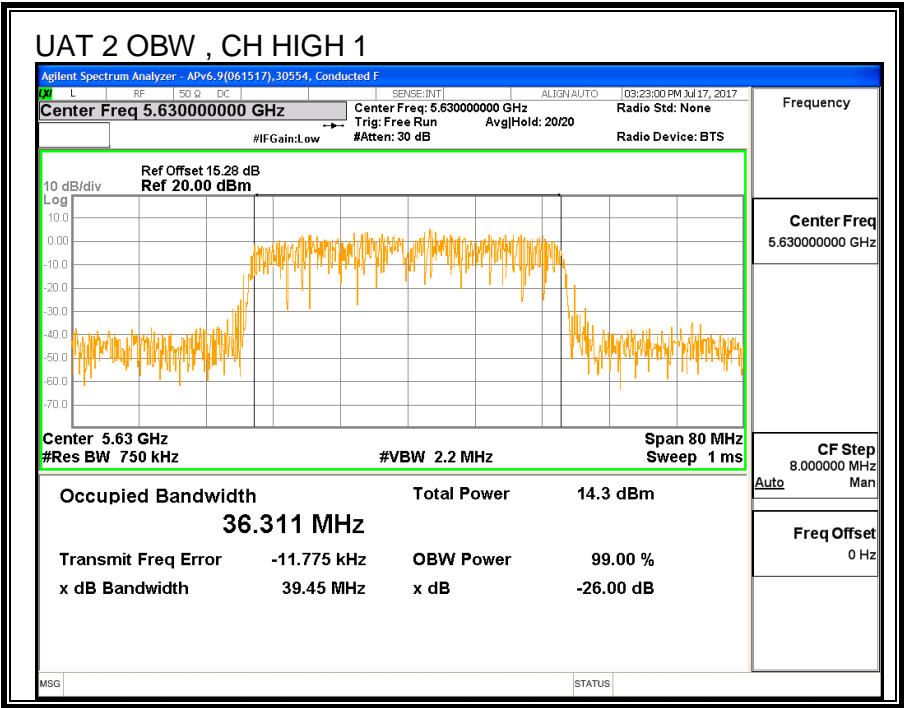
Channel	Frequency	99% BW UAT 2 (MHz)	99% BW LAT 3 (MHz)
Low	5510	34.971	36.199
Mid	5550	36.139	36.223
Mid	5590	36.252	36.360
High 1	5630	36.311	36.314
High 2	5670	36.238	36.266
142	5710	36.410	36.125

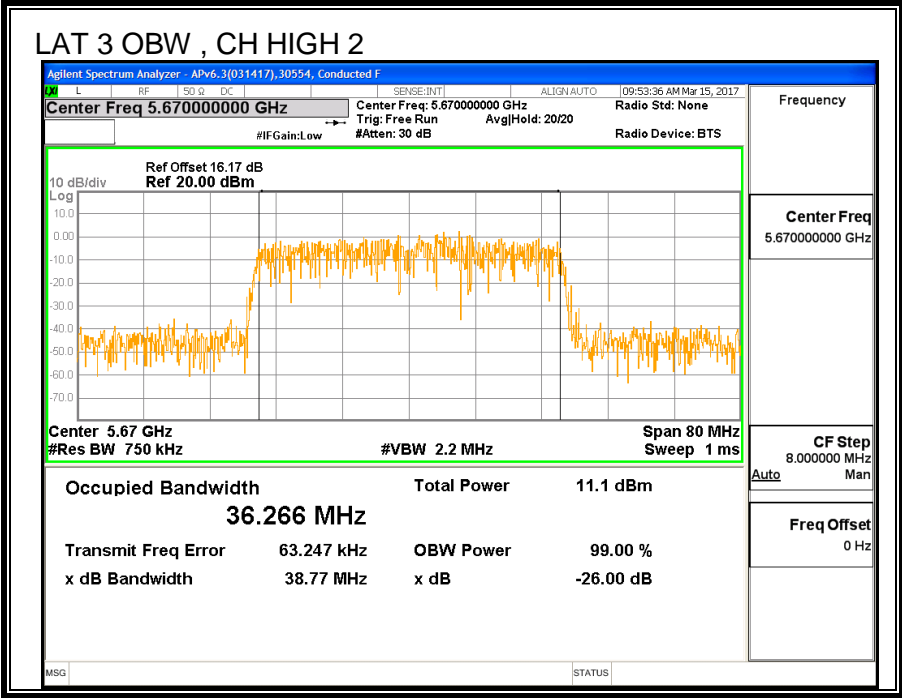
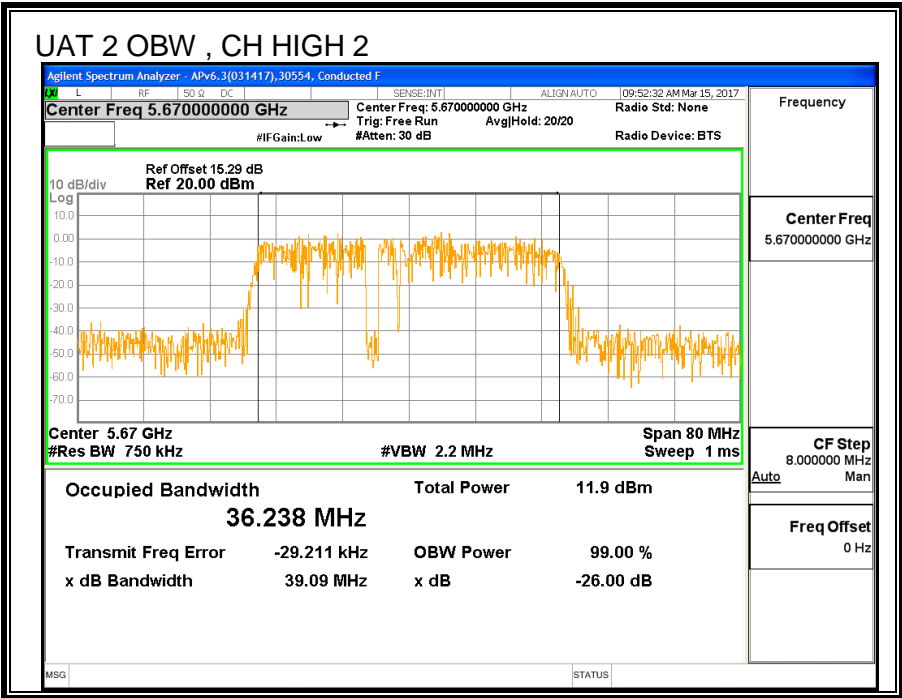


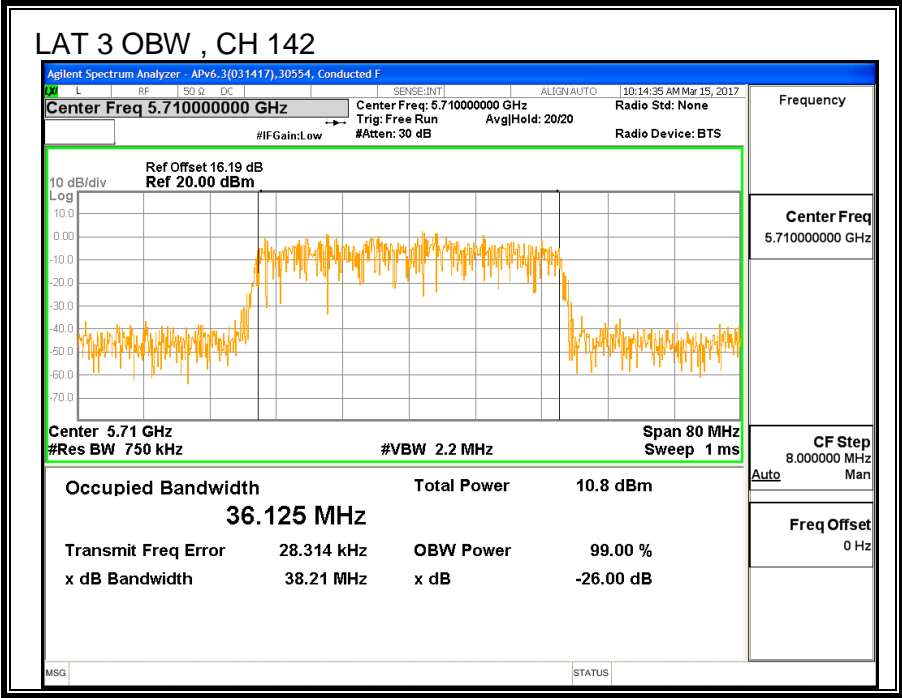
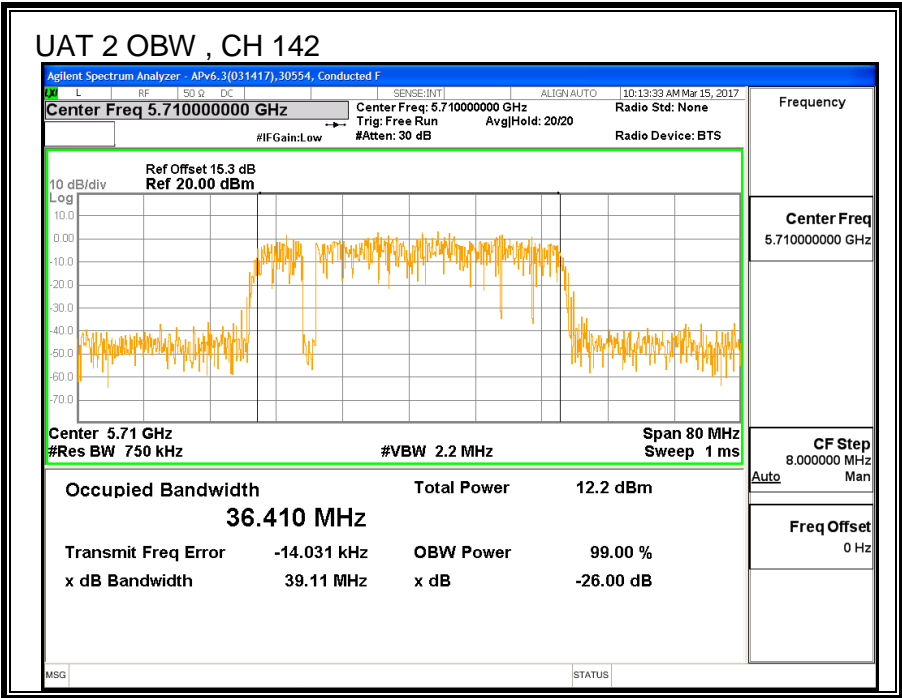












### 8.29.3. AVERAGE POWER

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#### 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	5510	14.32	14.42	17.38
Mid	5550	18.28	18.38	21.34
Mid	5590	19.30	19.33	22.33
High 1	5630	18.37	18.34	21.37
High 2	5670	15.87	15.83	18.86
142	5710	19.25	19.38	22.33

#### 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  $11 \text{ dBm} + 10 \log B$ , 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.

PSD test procedure: KDB 789033 D02 v01r04 Section F (SA-2 method)

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

##### 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

## 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	34.971	-0.85	2.16	24.00	11.00
Mid	5550	40.10	36.139	-0.85	2.16	24.00	11.00
Mid	5590	40.60	36.252	-0.85	2.16	24.00	11.00
High 1	5630	40.20	36.311	-0.85	2.16	24.00	11.00
High 2	5670	40.10	36.238	-0.85	2.16	24.00	11.00

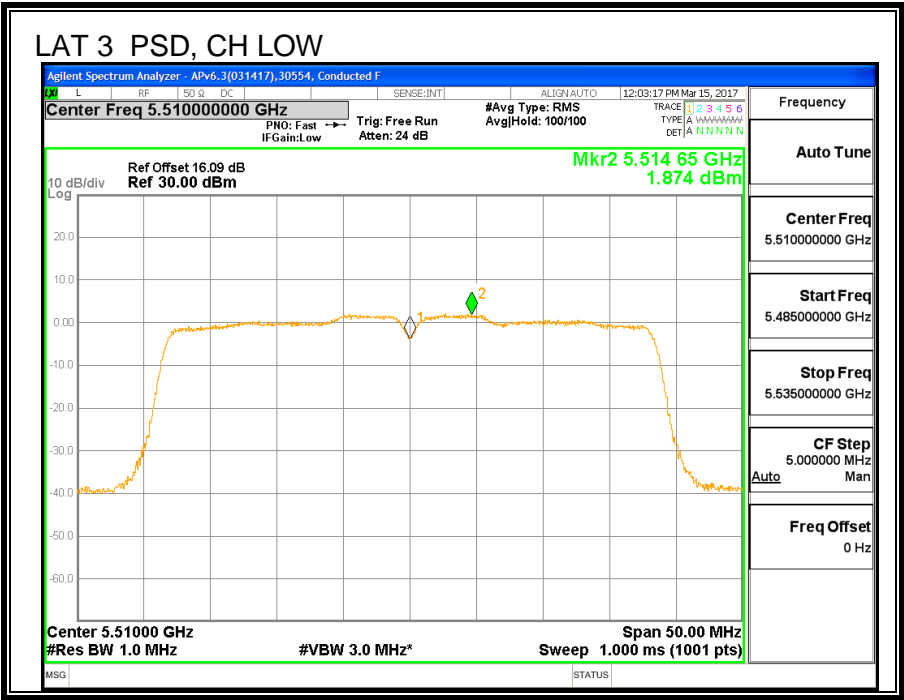
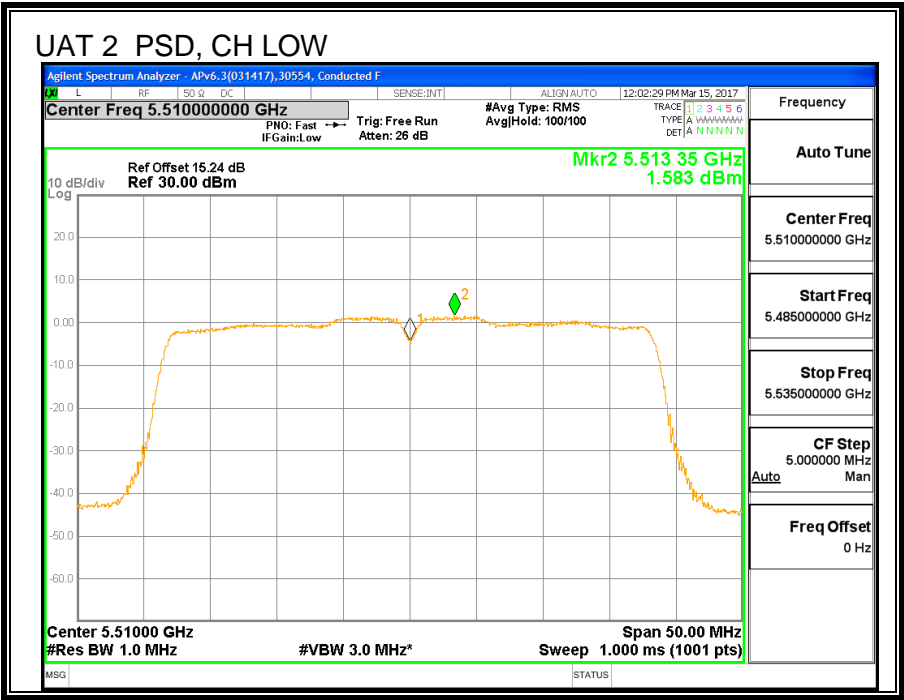
Duty Cycle CF (dB)	0.09	Included in Calculations of Corr'd PSD
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### Output Power Results

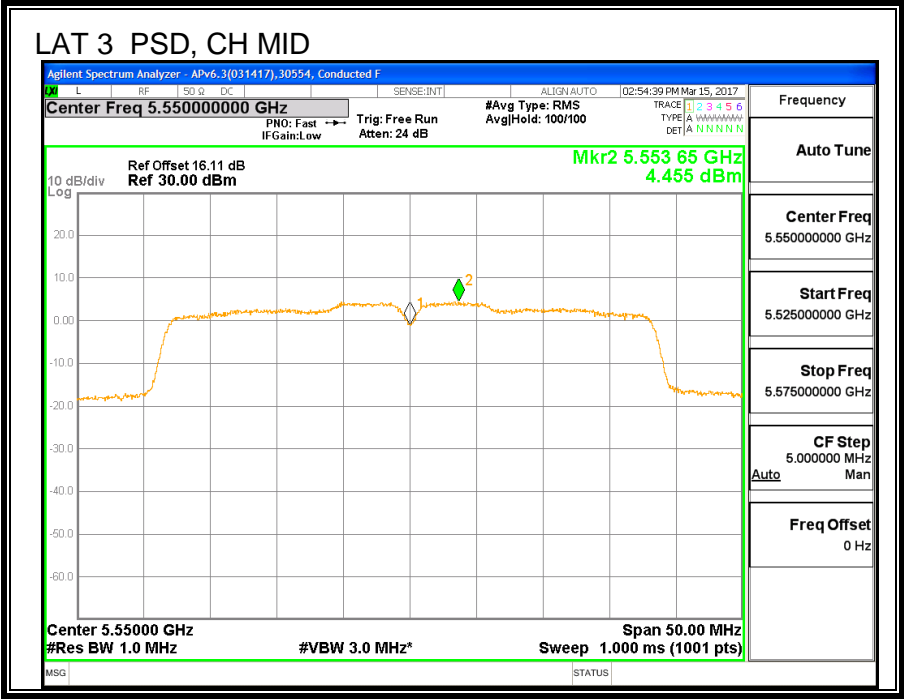
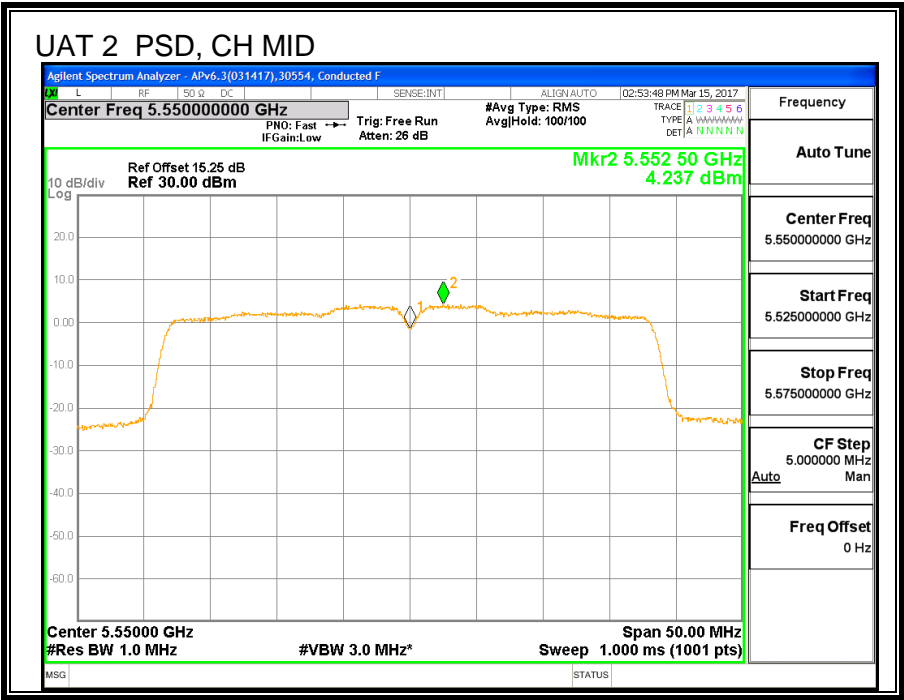
Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5510	14.32	14.42	17.38	24.00	-6.62
Mid	5550	18.28	18.38	21.34	24.00	-2.66
Mid	5590	19.30	19.33	22.33	24.00	-1.67
High 1	5630	18.37	18.34	21.37	24.00	-2.63
High 2	5670	15.87	15.83	18.86	24.00	-5.14

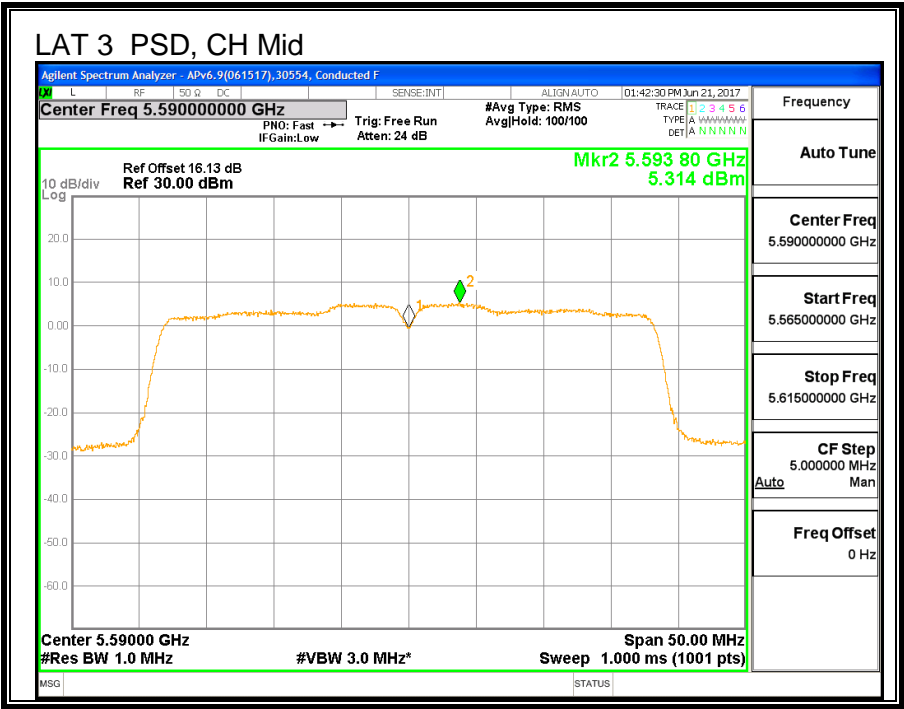
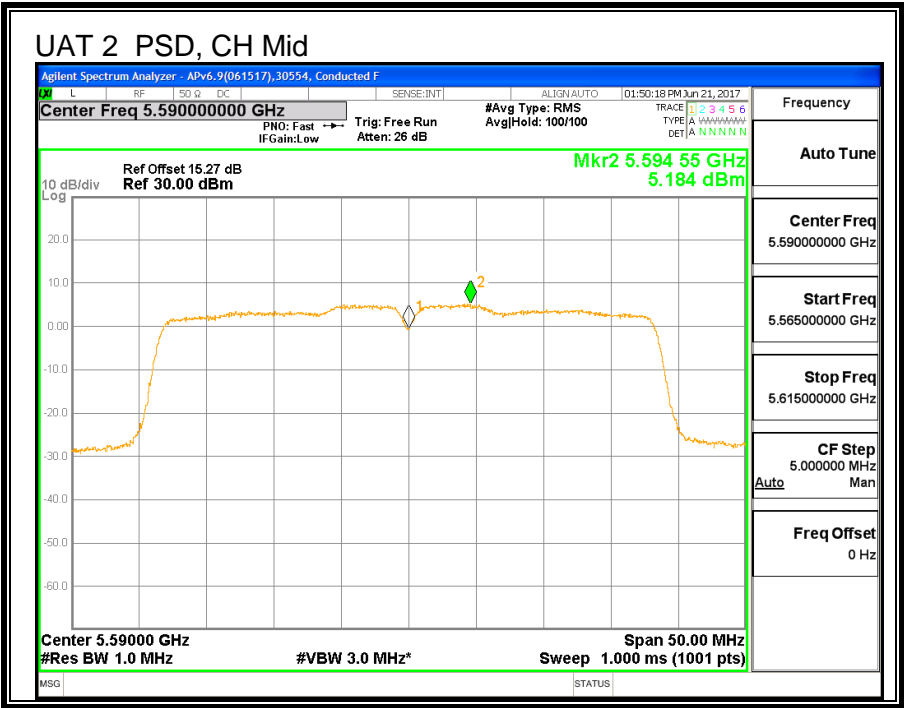
### PSD Results

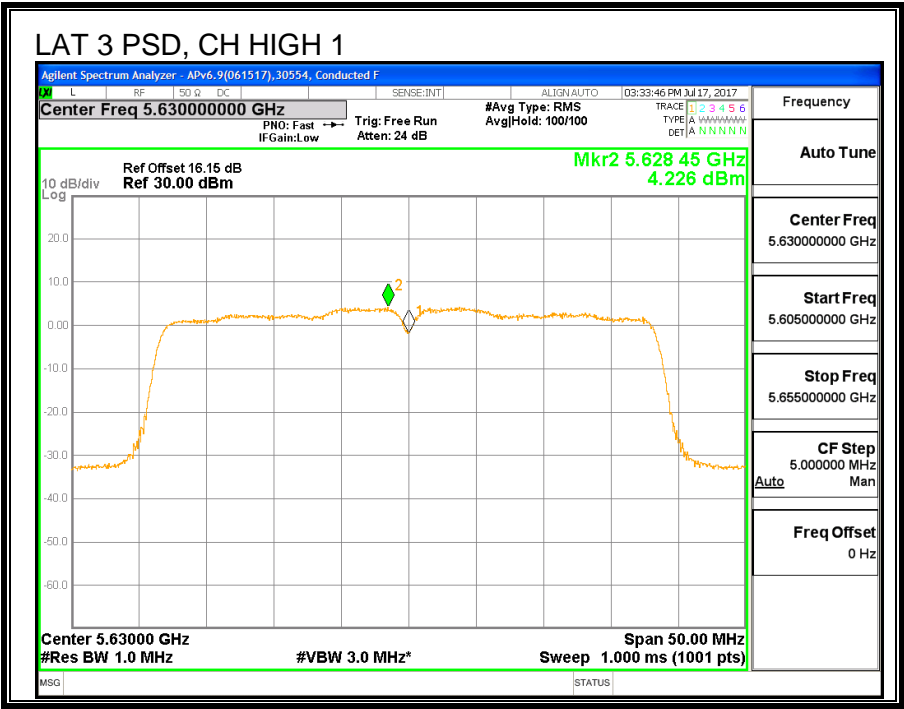
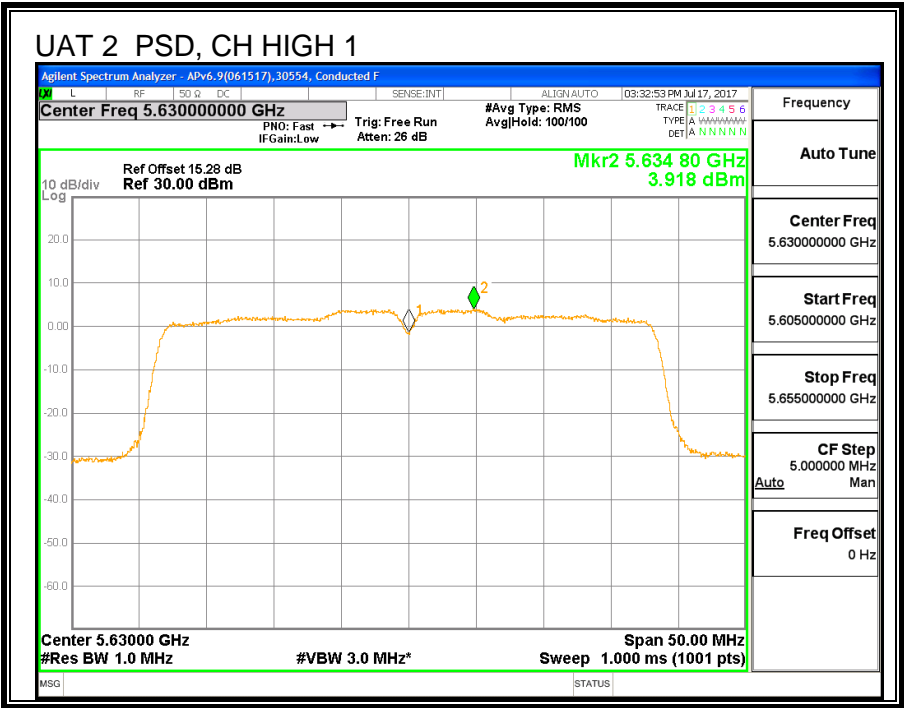
Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5510	1.583	1.874	4.83	11.00	-6.17
Mid	5550	4.237	4.455	7.45	11.00	-3.55
Mid	5590	5.184	5.314	8.35	11.00	-2.65
High 1	5630	3.918	4.226	7.18	11.00	-3.82
High 2	5670	3.682	4.275	7.09	11.00	-3.91

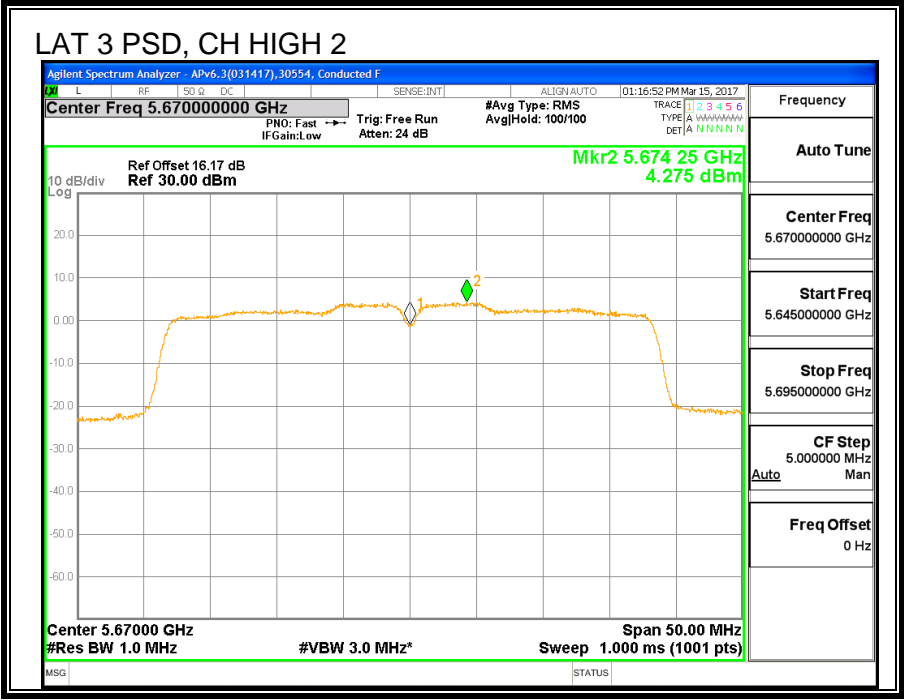
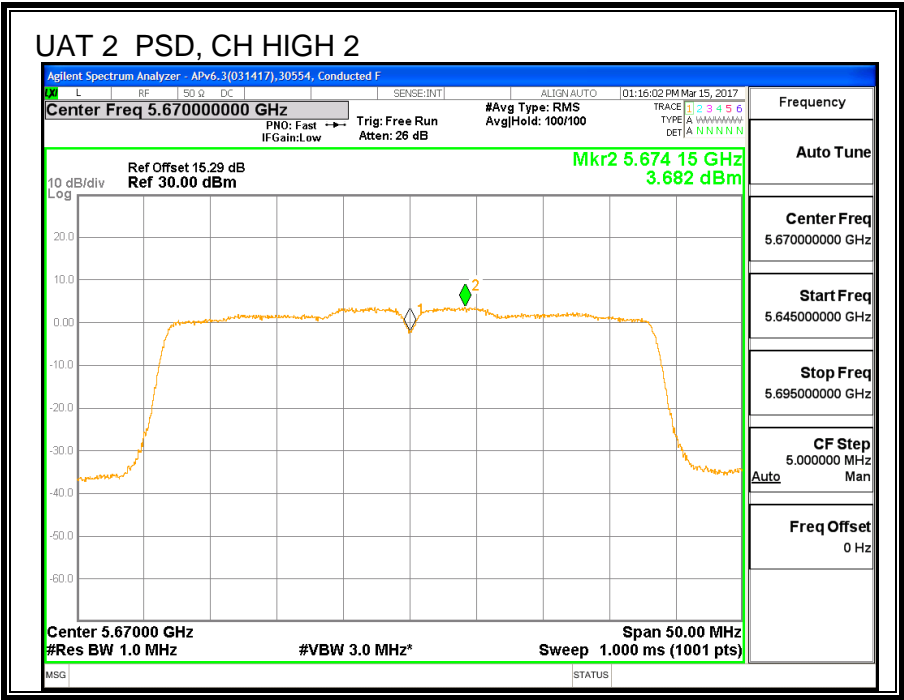












## 8.30. 11ac HT40 2TX CDD MIMO STRADDLE CHANNEL 142

### 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	35.00	-0.85	2.16	24.00	11.00

Duty Cycle CF (dB)	0.09	Included in Calculations of Corr'd Power & PSD
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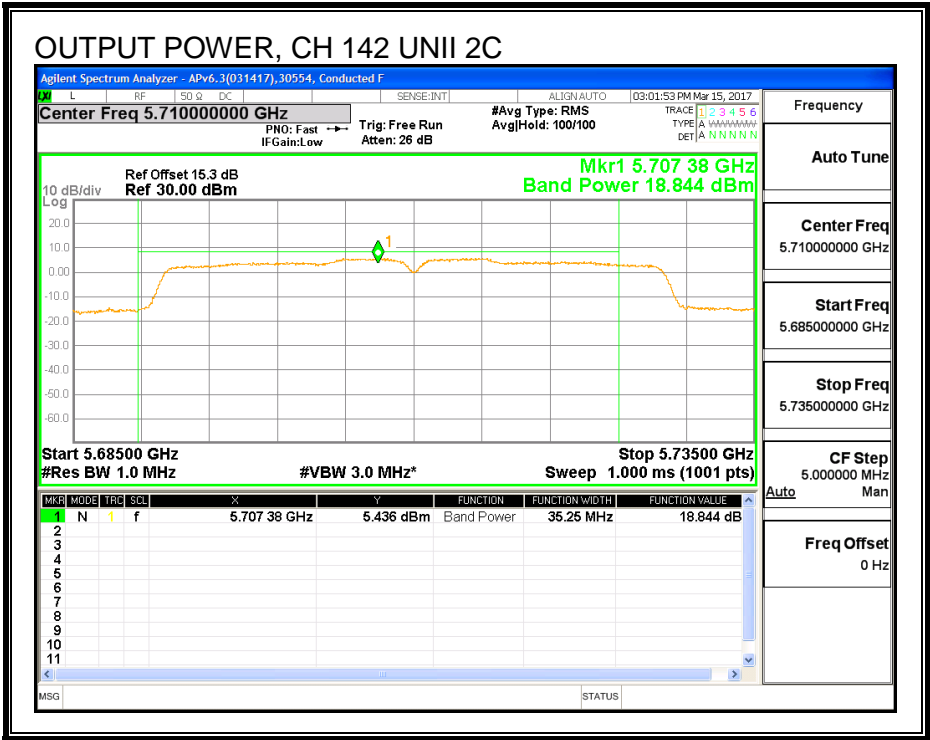
##### Output Power Results

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	18.84	18.25	21.66	24.00	-2.34

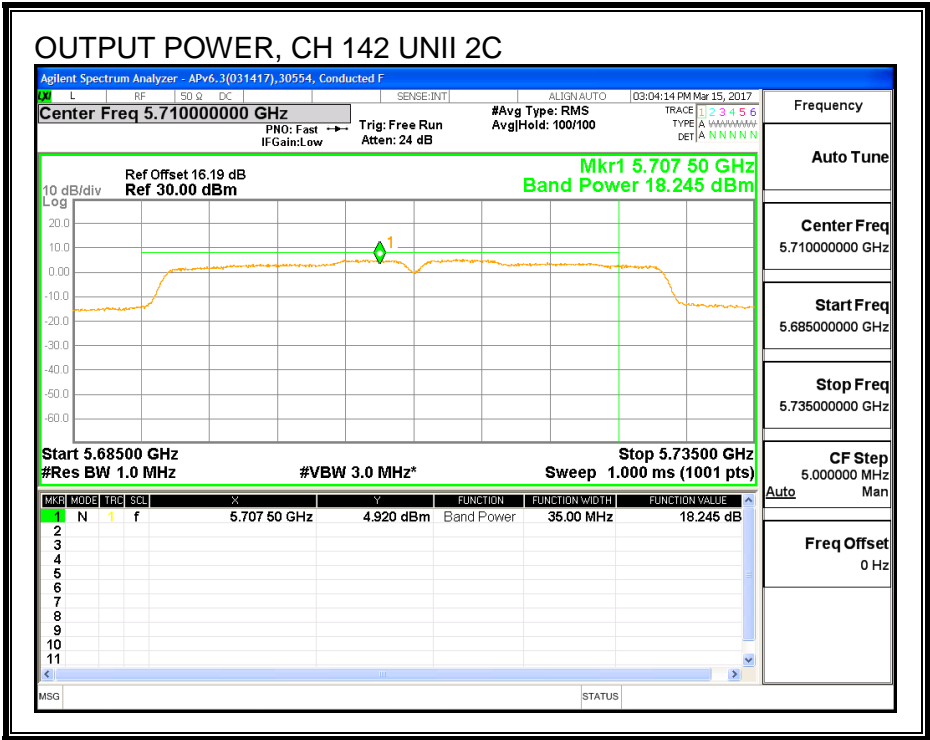
##### PSD Results

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	5.68	5.34	8.61	11.00	-2.39

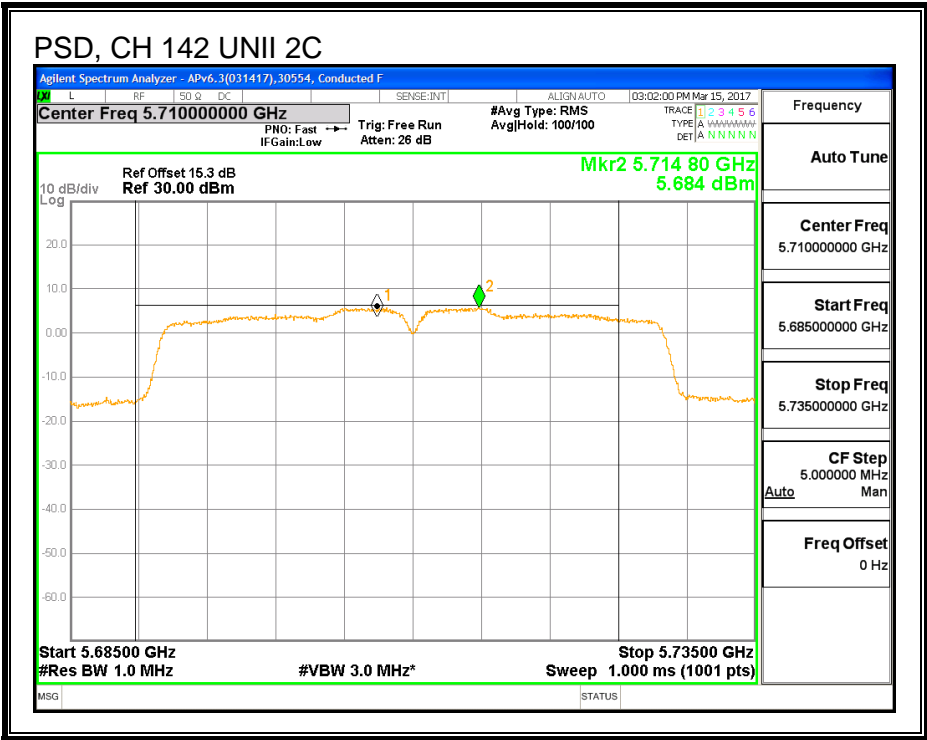
OUTPUT POWER, UAT 2



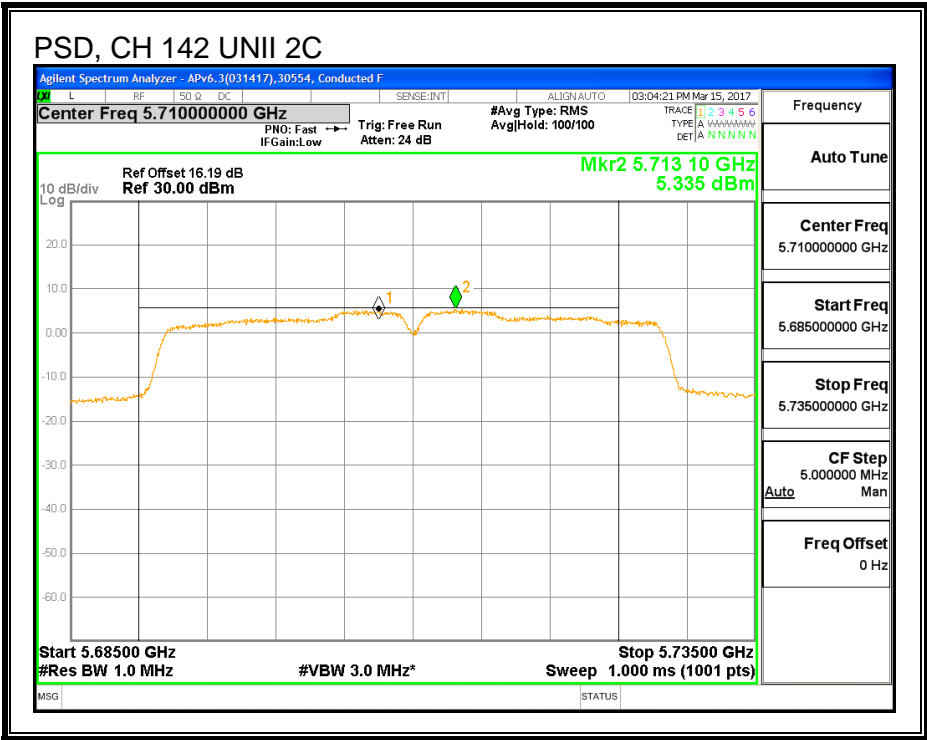
OUTPUT POWER, LAT 3



PSD, UAT 2



PSD, LAT 3



# **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	5.00	-0.05	2.92	30.00	30.00

<b>Duty Cycle CF (dB)</b>	0.09	<b>Included in Calculations of Corr'd Power &amp; PSD</b>
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## **Output Power Results**

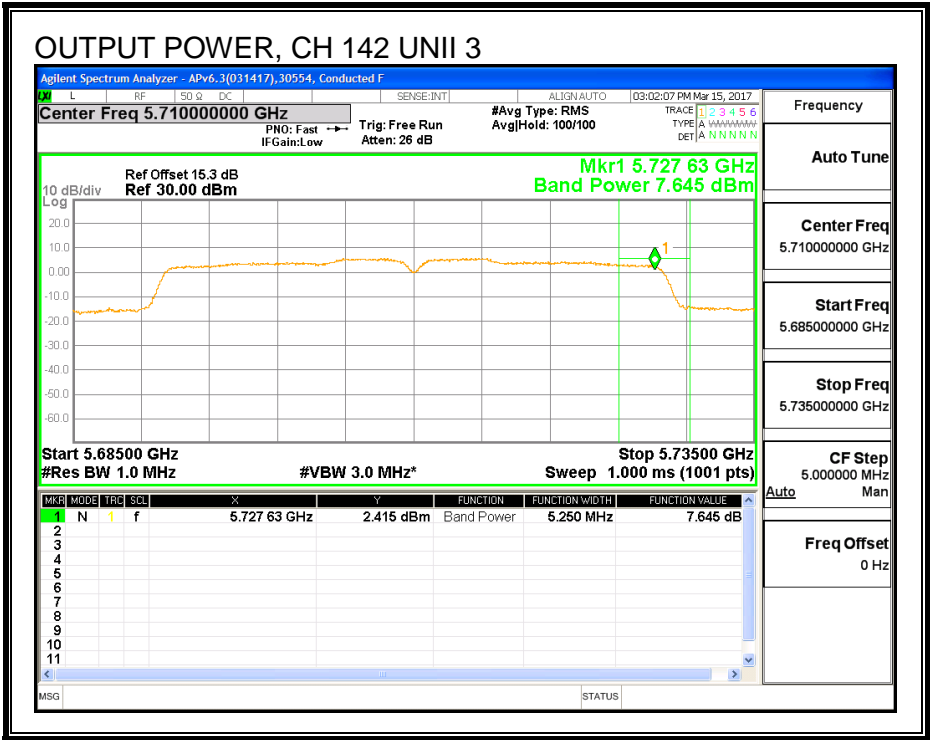
Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
142	5710	7.65	7.27	10.56	30.00	-19.44

## **PSD Results**

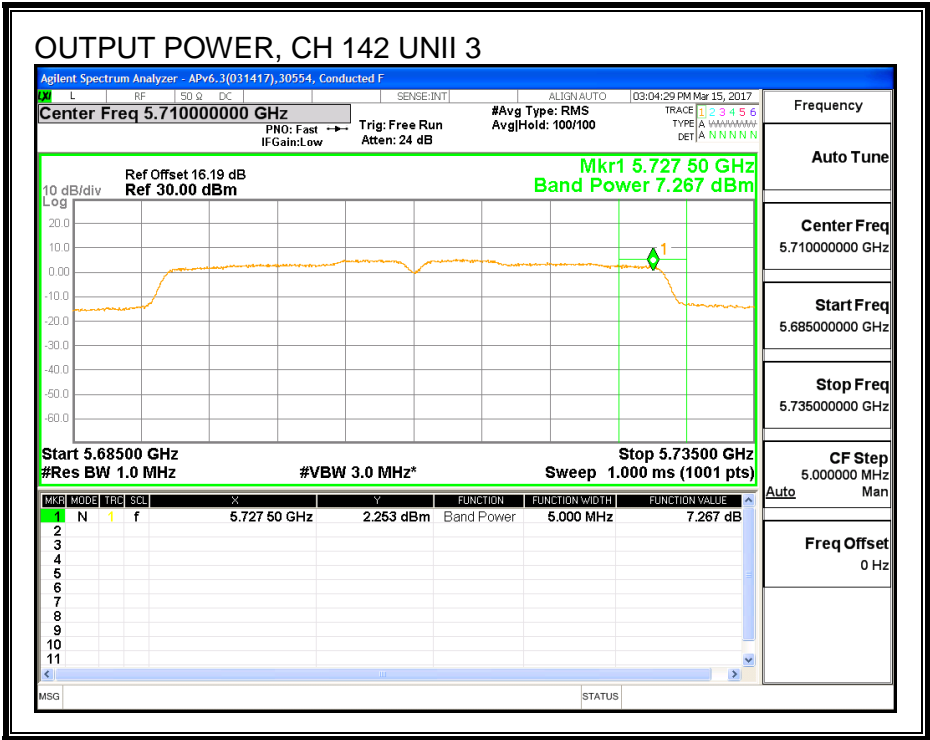
Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
142	5710	0.58	-0.01	3.40	30.00	-26.60



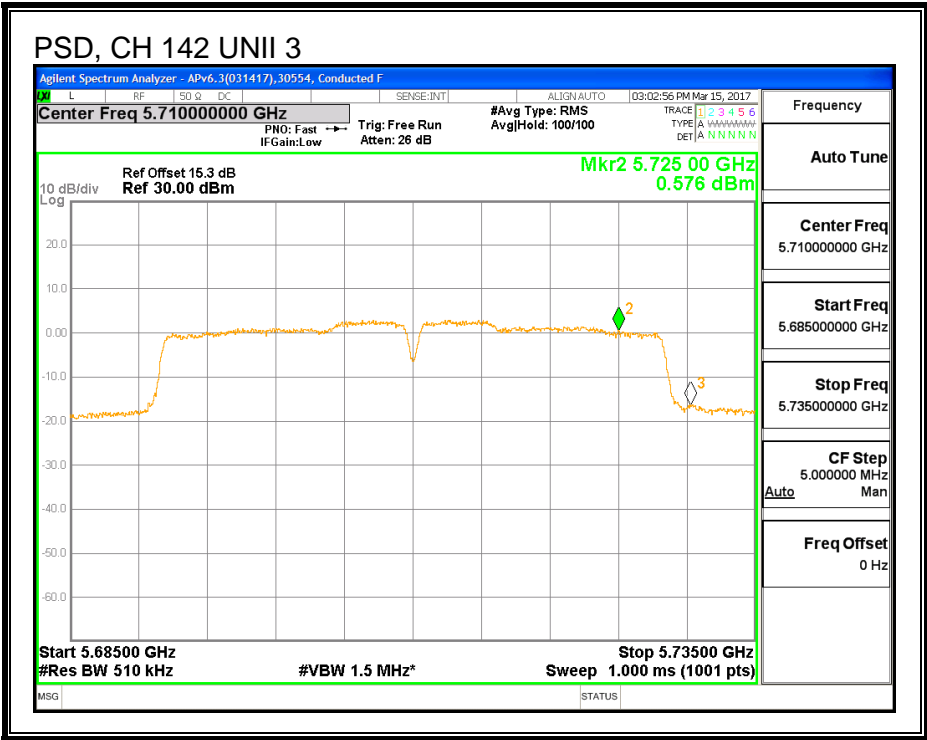
OUTPUT POWER, UAT 2



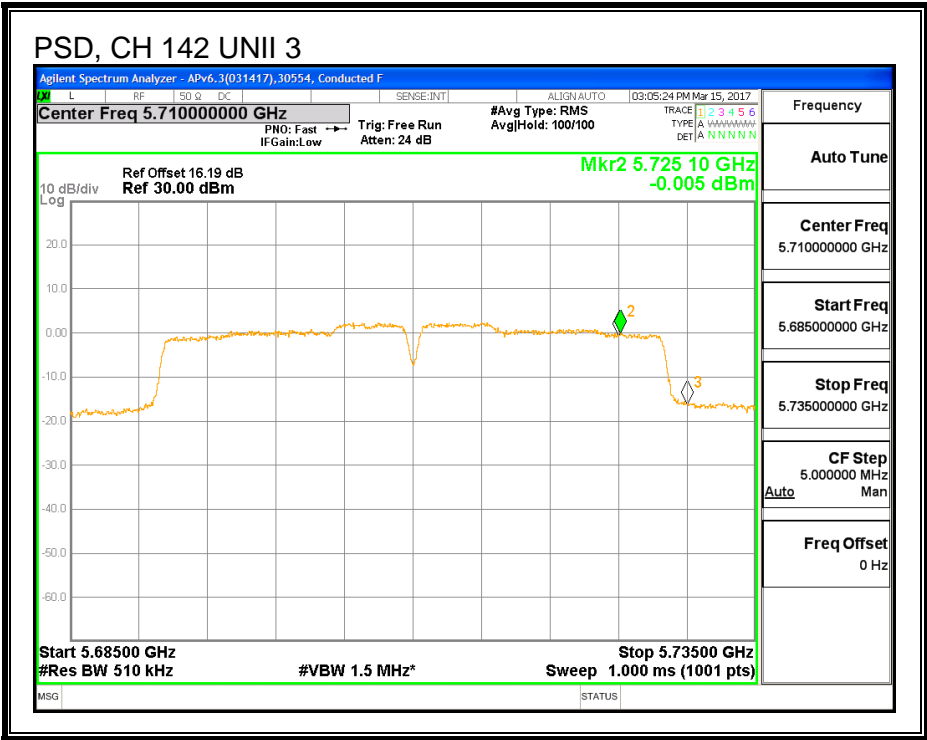
OUTPUT POWER, LAT 3



PSD, UAT 2



PSD, LAT 3



### 8.30.2. 6 dB BANDWIDTH

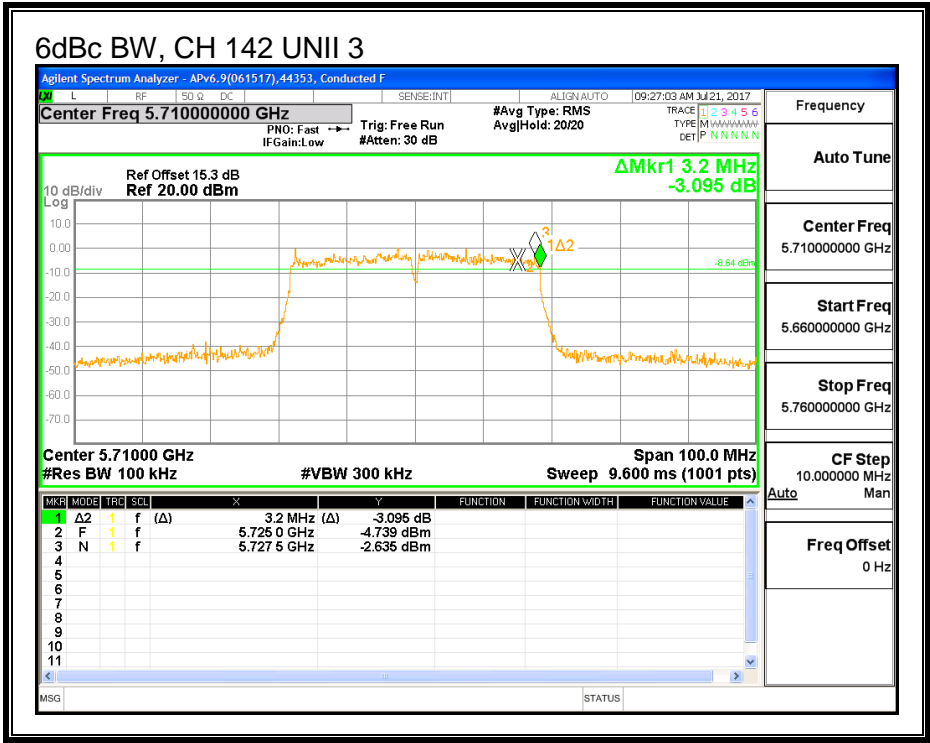
#### LIMITS

FCC §15.407 (e)

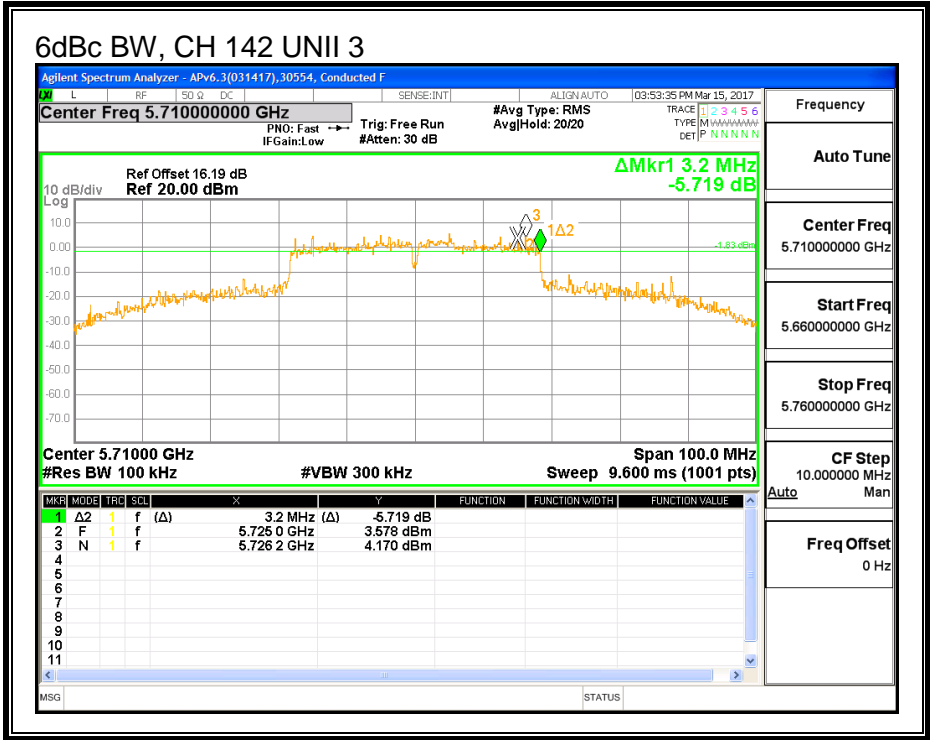
The minimum 6 dB bandwidth shall be at least 500 kHz.

#### RESULTS

Channel	Frequency (MHz)	6dB BW UAT 2 (MHz)	6dB BW LAT 3 (MHz)
High	5710	3.20	3.20



**LAT 3**



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

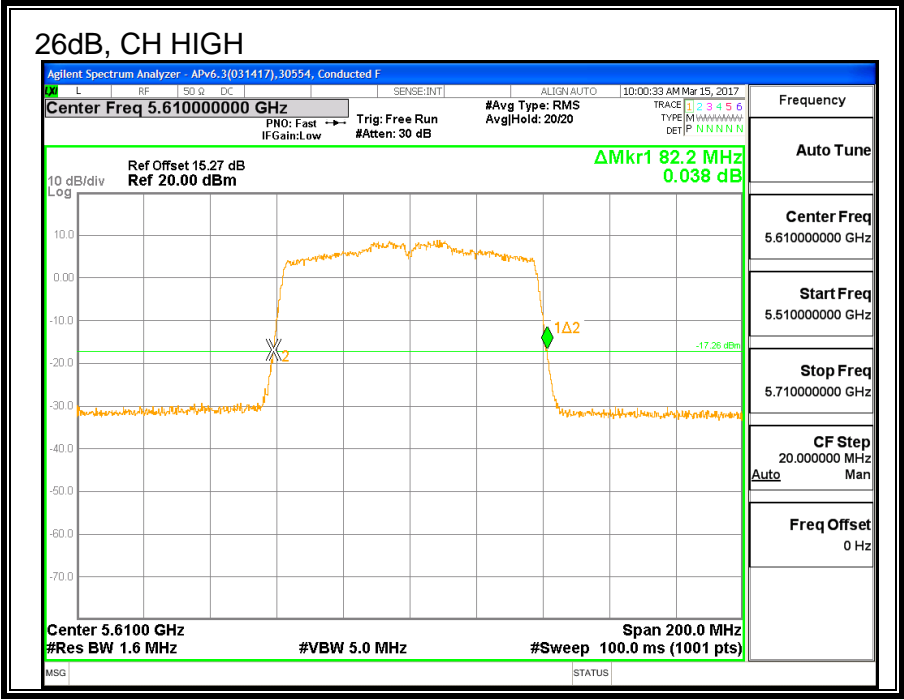
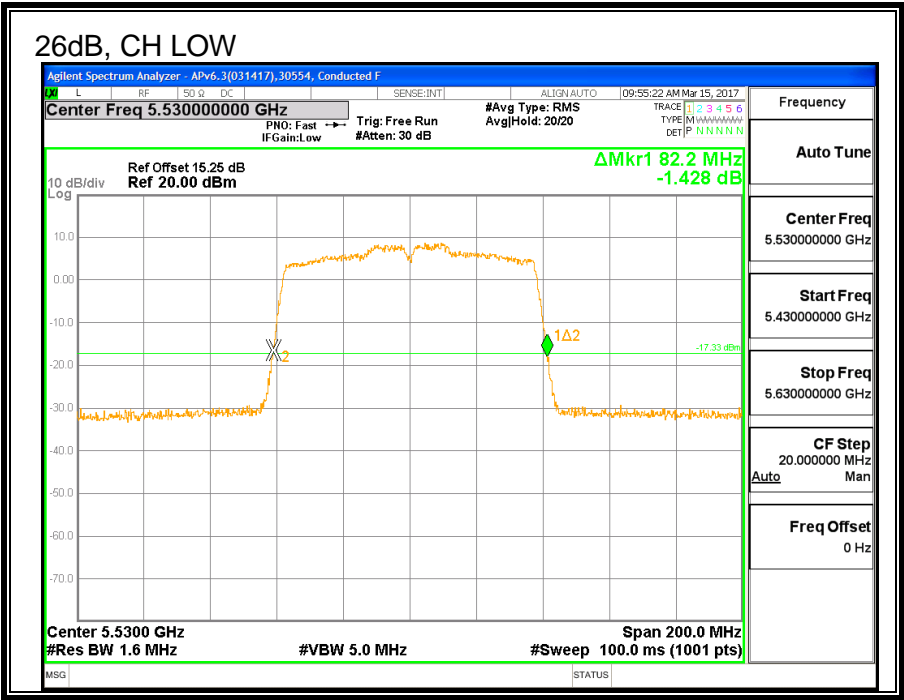
### **8.31.1. 26 dB BANDWIDTH**

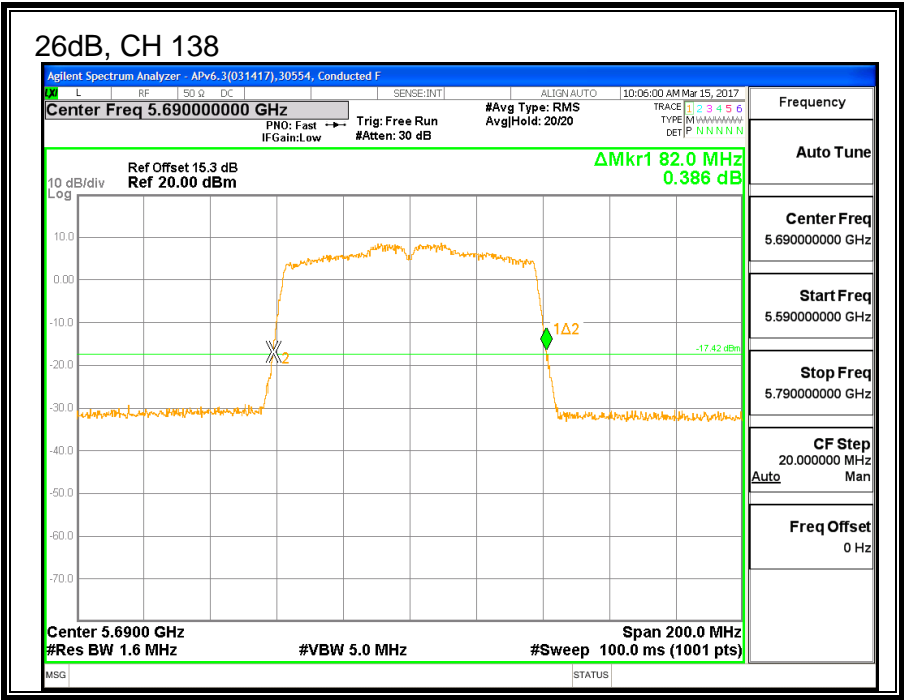
#### **LIMITS**

None; for reporting purposes only.

#### **RESULTS**

<b>Channel</b>	<b>Frequency</b>	<b>26 dB BW UAT 2 (MHz)</b>
Low	5530	82.2
High	5610	82.2
138	5690	82.0





### 8.31.2. 99% BANDWIDTH

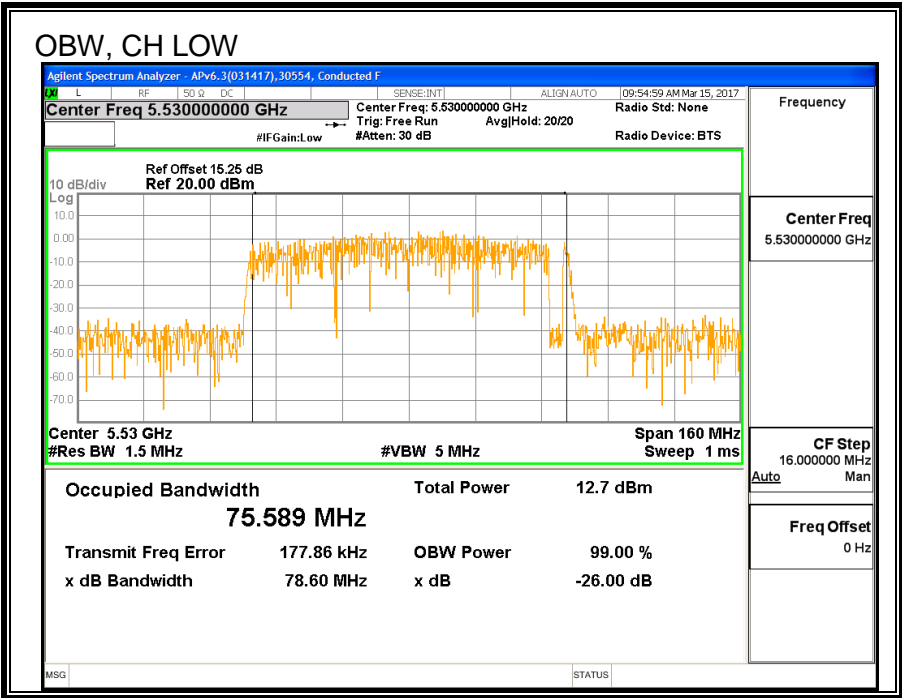
#### LIMITS

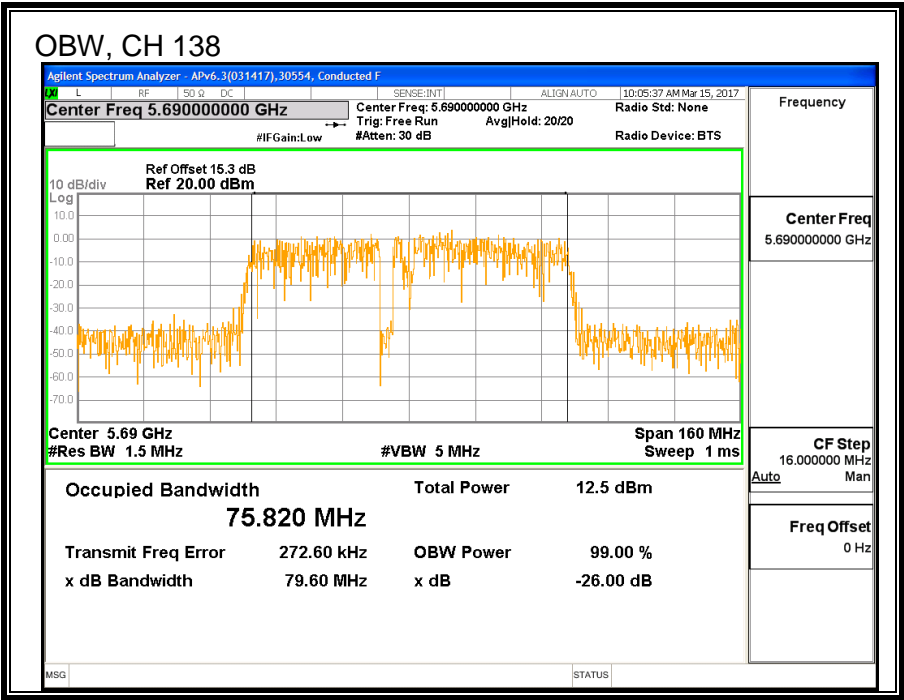
None; for reporting purposes only.

#### RESULTS

Channel	Frequency	99% BW UAT 2 (MHz)
Low	5530	75.589
High	5610	75.853
138	5690	75.820







### 8.31.3. AVERAGE POWER

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#### 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	14.86
High	5610	18.78
138	5690	18.93

#### **8.31.4. 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.

PSD test procedure: KDB 789033 D02 v01r04 Section F (SA-2 method)

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	82.20	75.59	-0.75	24.00	11.00
Mid	5610	82.20	75.85	-0.75	24.00	11.00

Duty Cycle CF (dB)	0.19	Included in Calculations of Corr'd PSD
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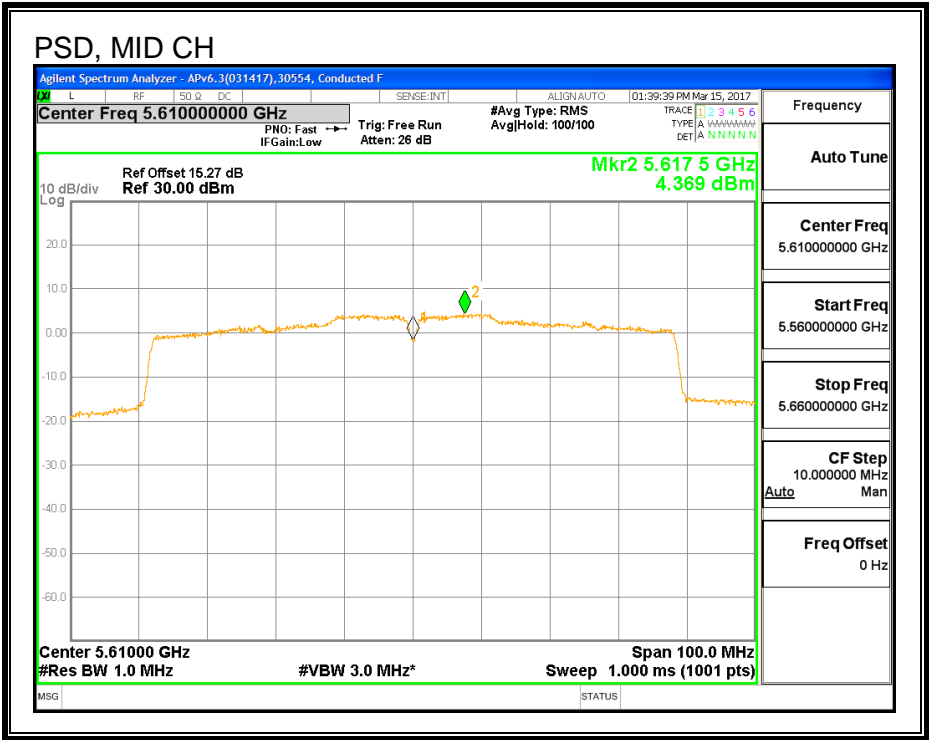
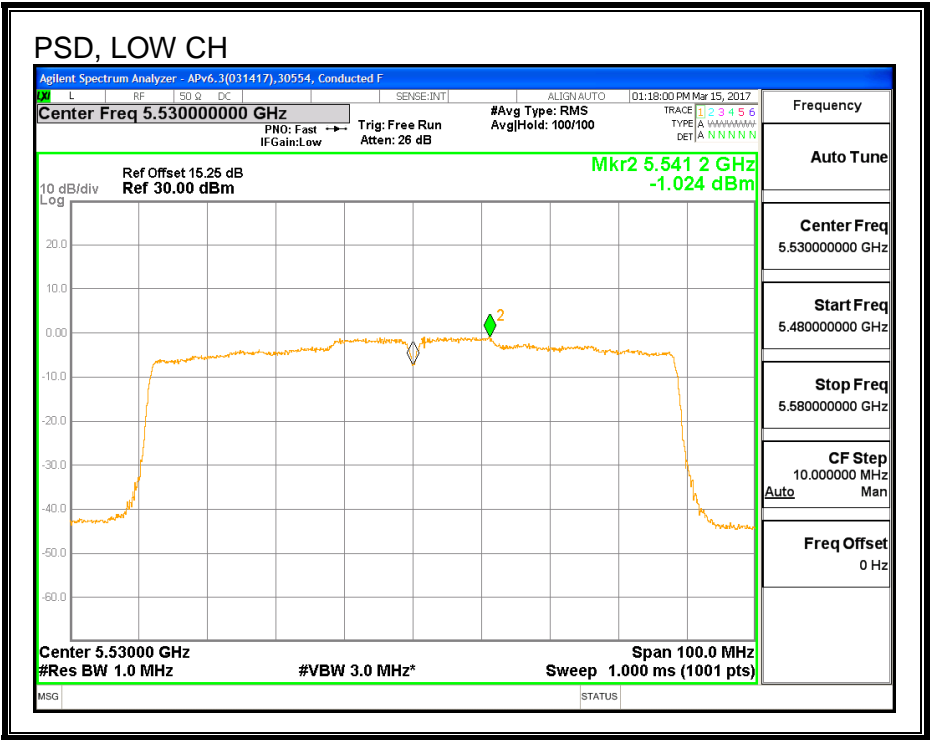
### Output Power Results

Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5530	14.86	14.86	24.00	-9.14
Mid	5610	18.78	18.78	24.00	-5.22

### PSD Results

Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5530	-1.024	-0.83	11.00	-11.83
Mid	5610	4.369	4.56	11.00	-6.44

PSD



## 8.32. 11ac HT80 UAT 2 SISO STRADDLE CHANNEL 138 RESULTS

### 8.32.1. 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)
138	5690	76.00	-0.75	-0.75	24.00	11.00

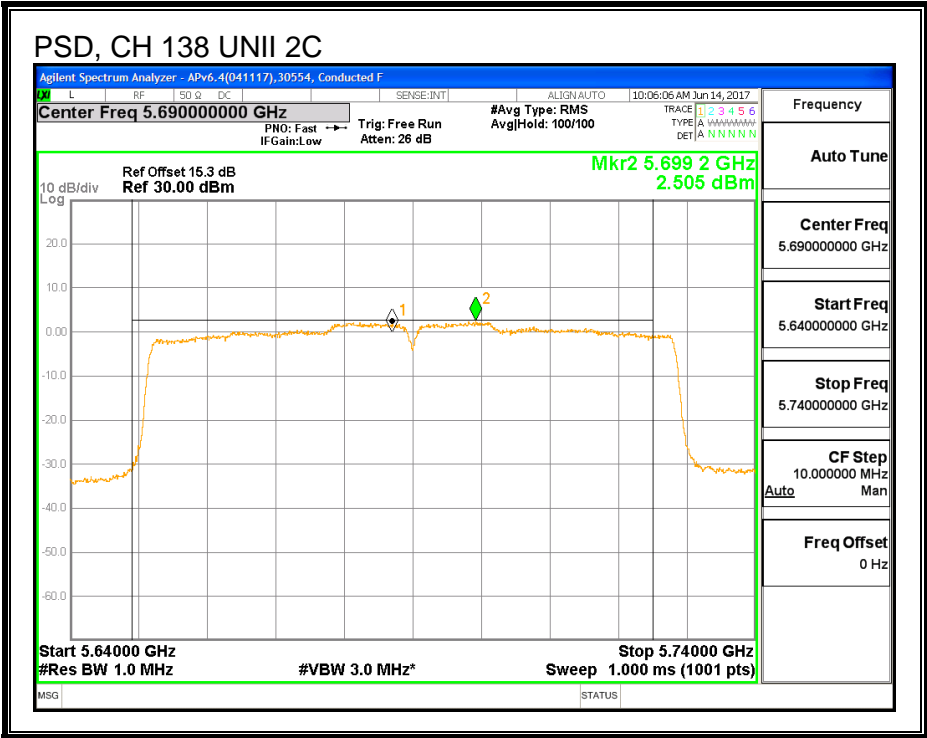
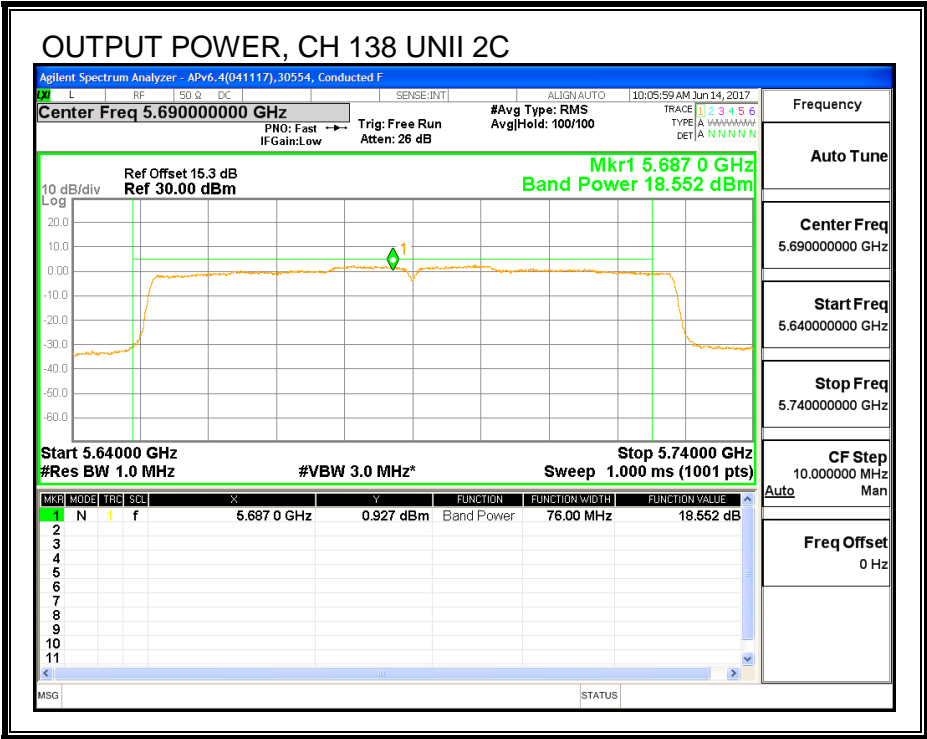
Duty Cycle CF (dB)	0.19	Included in Calculations of Corr'd Power & PSD
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##### Output Power Results

Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	18.55	18.74	24.00	-5.26

##### PSD Results

Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	2.51	2.70	11.00	-8.31





# **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	6.00	0.68	30.00	30.00

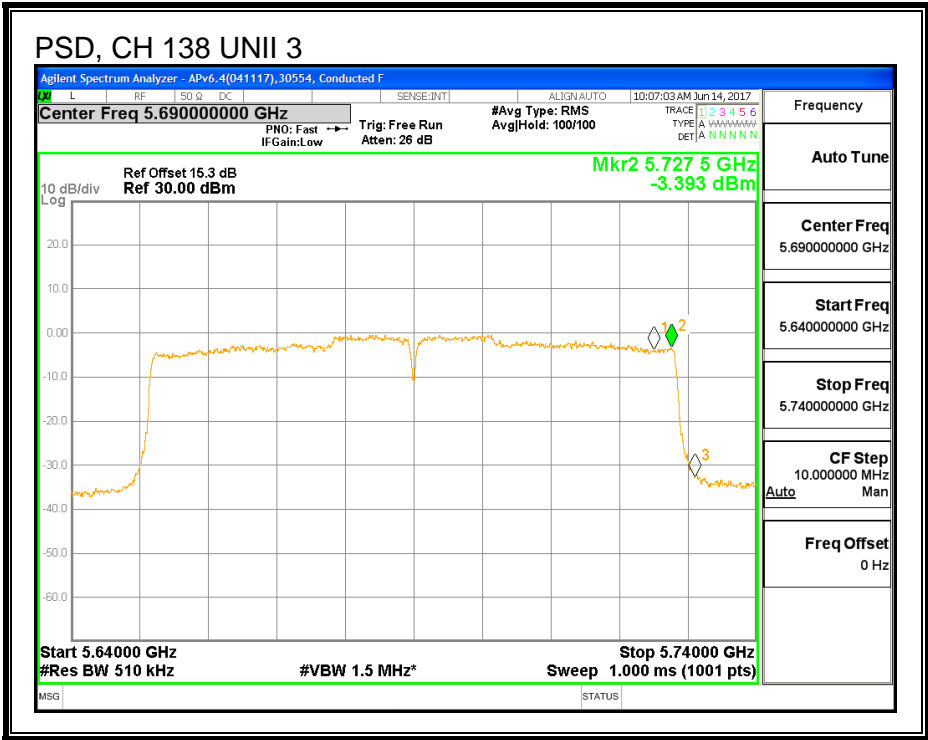
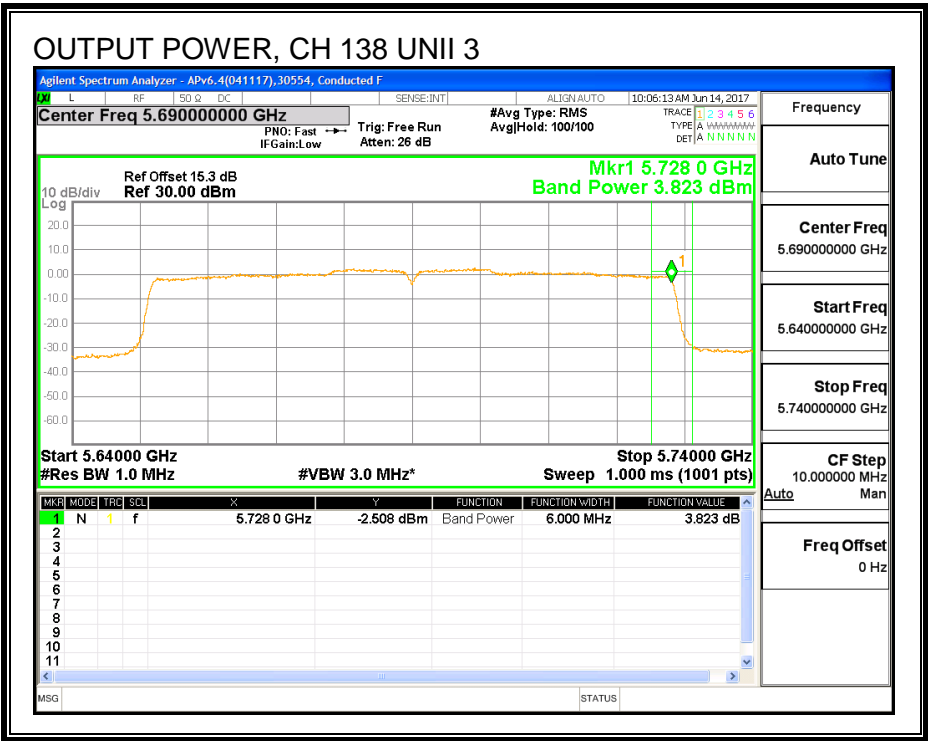
Duty Cycle CF (dB)	0.19	Included in Calculations of Corr'd Power & PSD
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## **Output Power Results**

Channel	Frequency (MHz)	UAT 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	3.82	4.01	30.00	-25.99

## **PSD Results**

Channel	Frequency (MHz)	UAT 2 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	-3.39	-3.20	30.00	-33.20



8.32.2. 6 dB BANDWIDTH

LIMITS

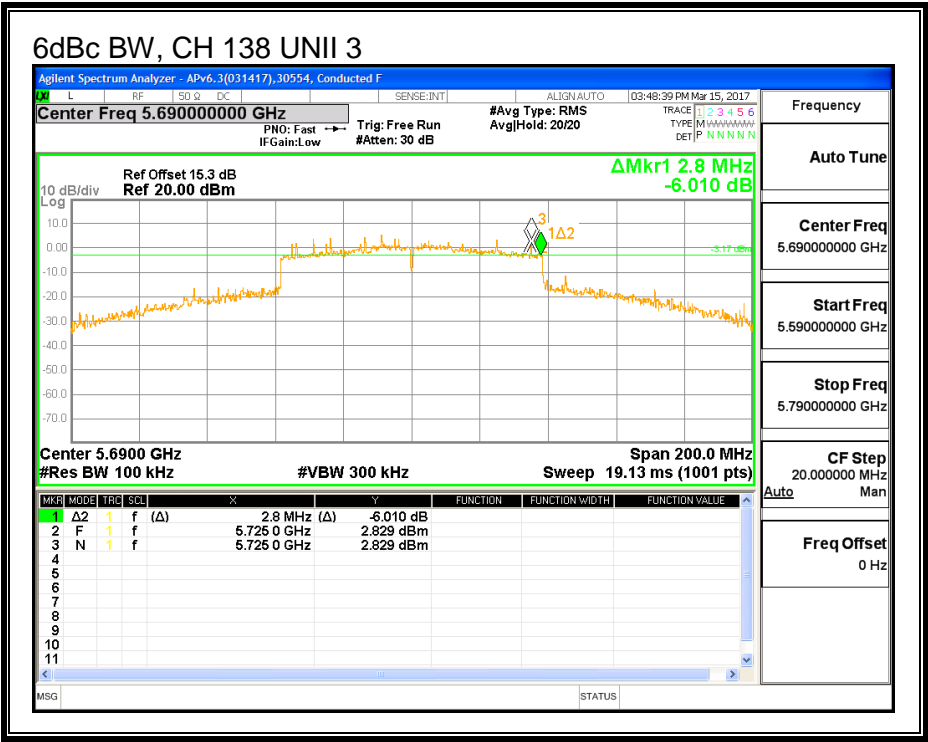
FCC §15.407 (e)

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

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)
High	5690	2.80

6 dB BANDWIDTH



### **8.33. 11ac HT80 LAT 3 SISO MODE IN THE 5.6GHz BAND**

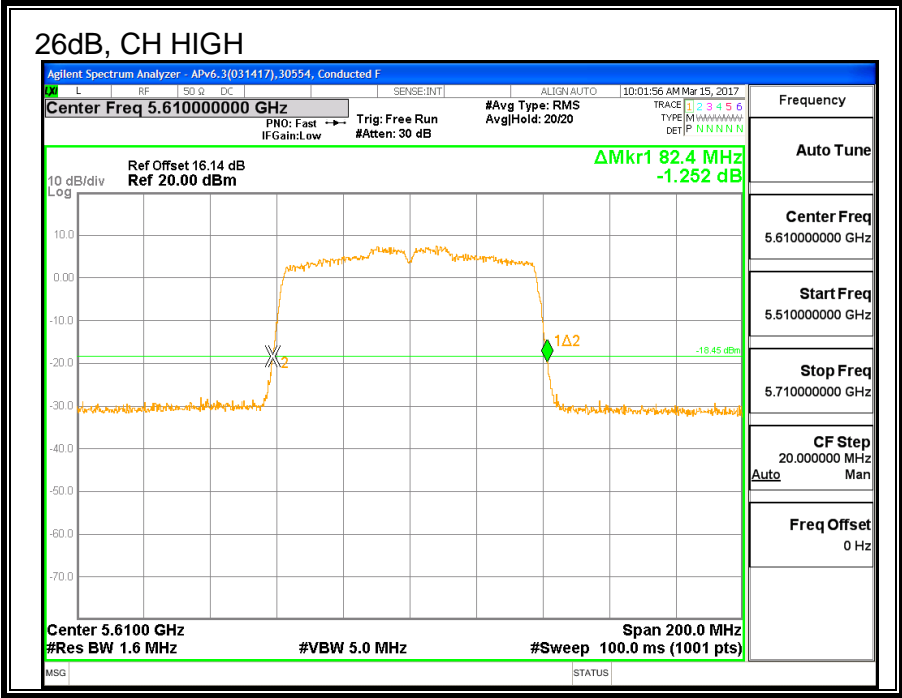
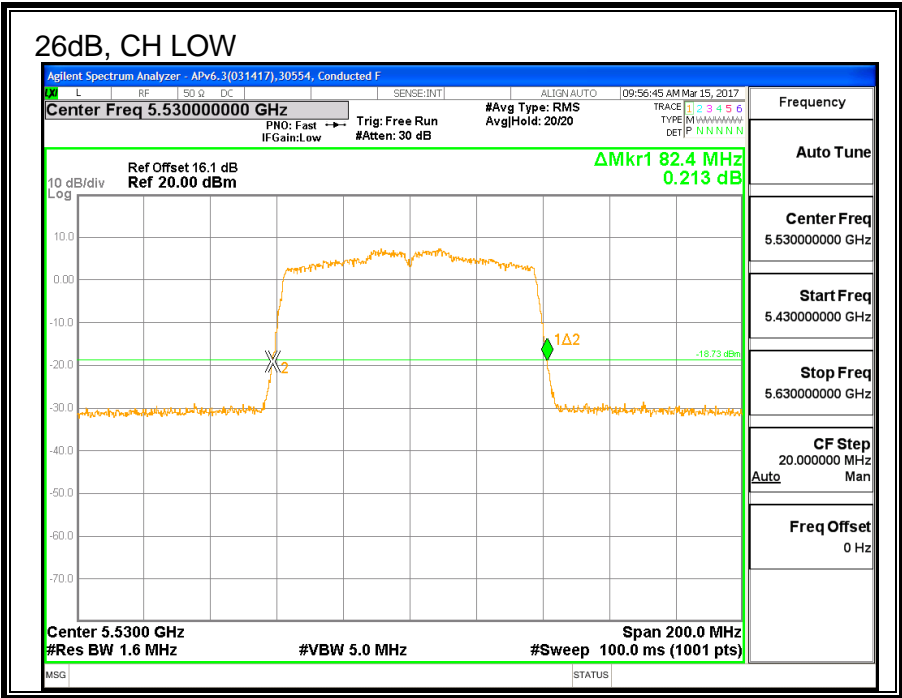
#### **8.33.1. 26 dB BANDWIDTH**

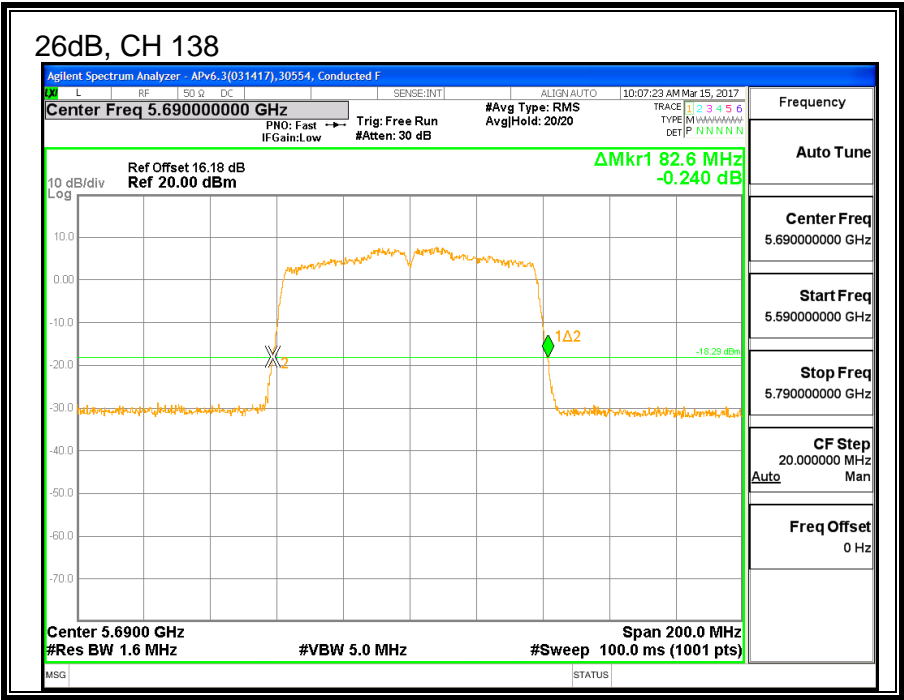
##### **LIMITS**

None; for reporting purposes only.

##### **RESULTS**

<b>Channel</b>	<b>Frequency</b>	<b>26 dB BW LAT 3 (MHz)</b>
Low	5530	82.4
High	5610	82.4
138	5690	82.6





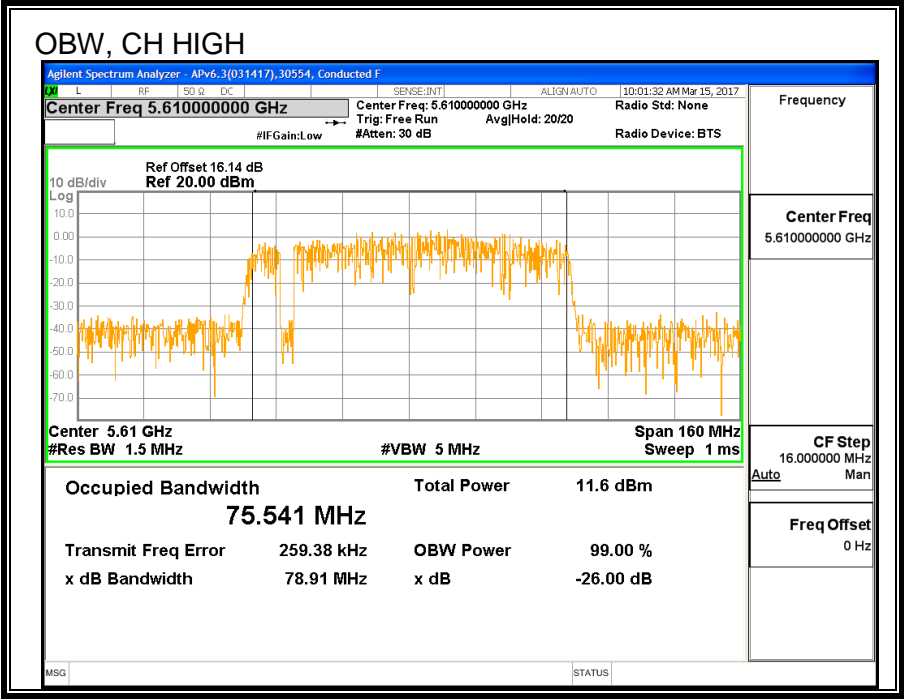
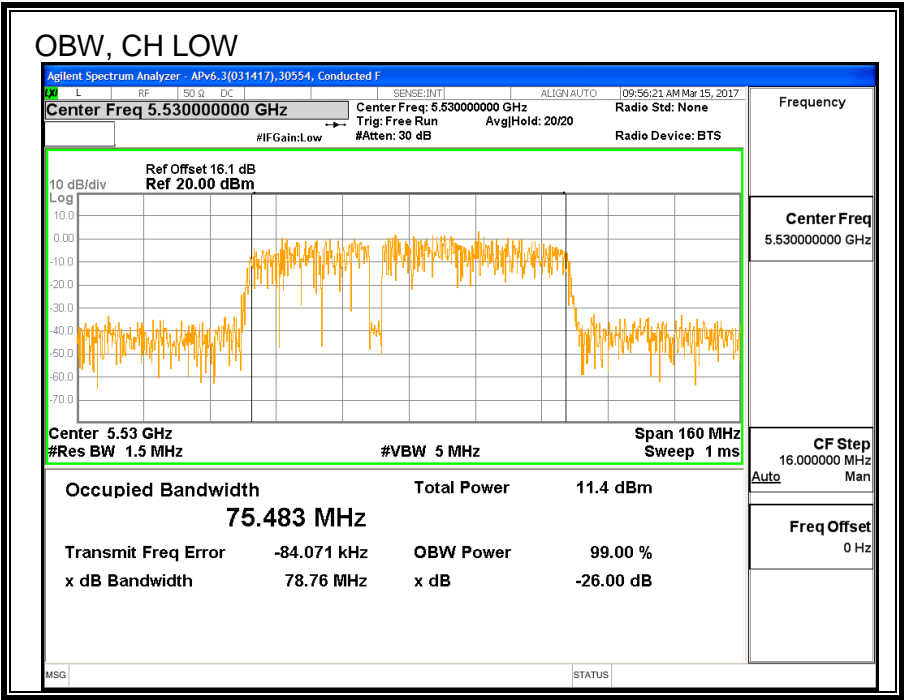
### 8.33.2. 99% BANDWIDTH

#### LIMITS

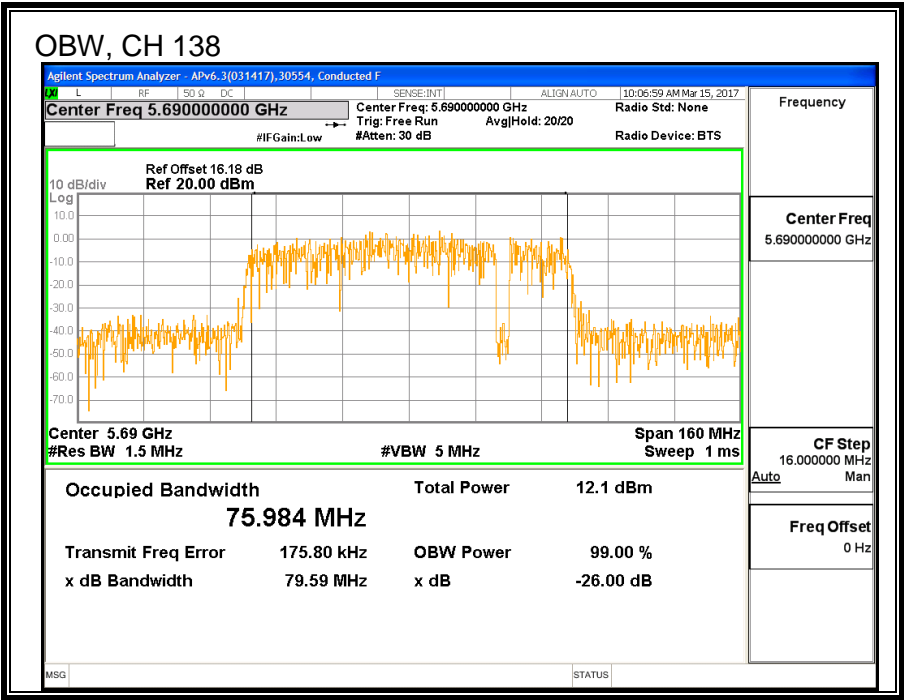
None; for reporting purposes only.

#### RESULTS

Channel	Frequency	99% BW LAT 3 (MHz)
Low	5530	75.483
High	5610	75.541
138	5690	75.984







### 8.33.3. AVERAGE POWER

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#### 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	14.76
High	5610	18.79
138	5690	18.86

#### **8.33.4. 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.

PSD test procedure: KDB 789033 D02 v01r04 Section F (SA-2 method)

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	82.40	75.48	-0.96	24.00	11.00
Mid	5610	82.40	75.54	-0.96	24.00	11.00

Duty Cycle CF (dB)	0.19	Included in Calculations of Corr'd PSD
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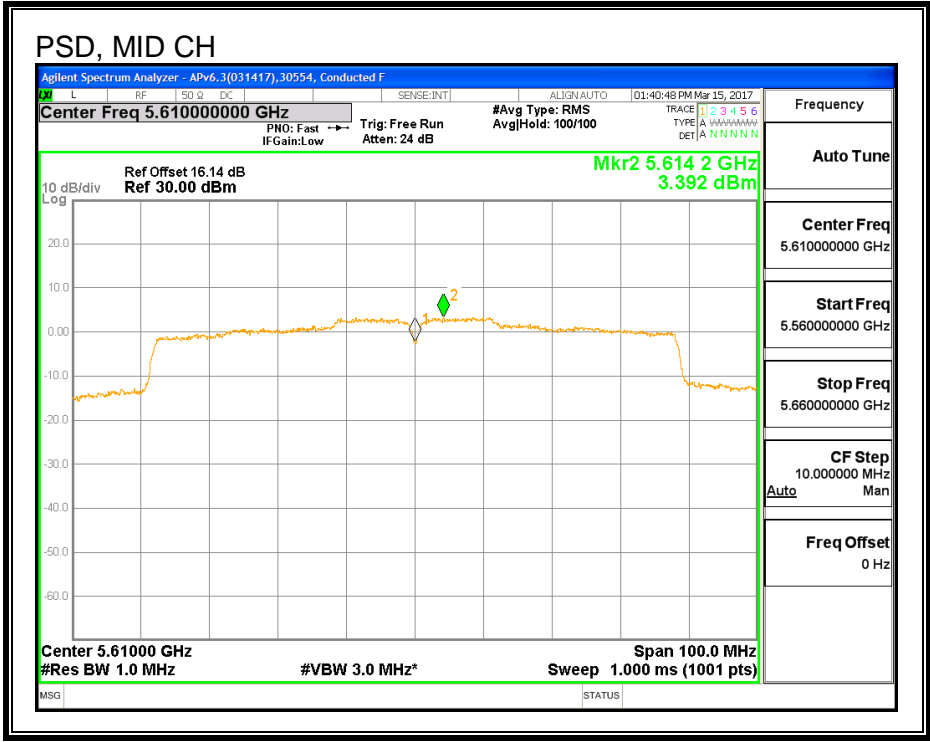
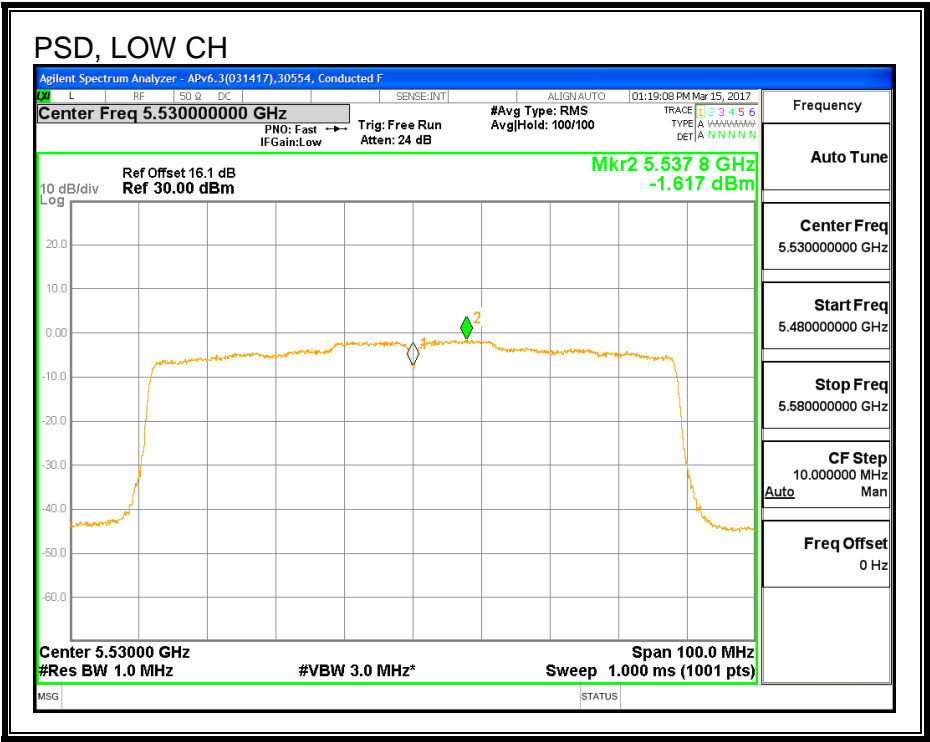
### Output Power Results

Channel	Frequency (MHz)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5530	14.76	14.76	24.00	-9.24
Mid	5610	18.79	18.79	24.00	-5.21

### PSD Results

Channel	Frequency (MHz)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5530	-1.617	-1.43	11.00	-12.43
Mid	5610	3.392	3.58	11.00	-7.42

PSD



## 8.34. 11ac HT80 LAT 3 SISO STRADDLE CHANNEL 138 RESULTS

### 8.34.1. 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)
138	5690	76.3	-0.96	-0.96	24.00	11.00

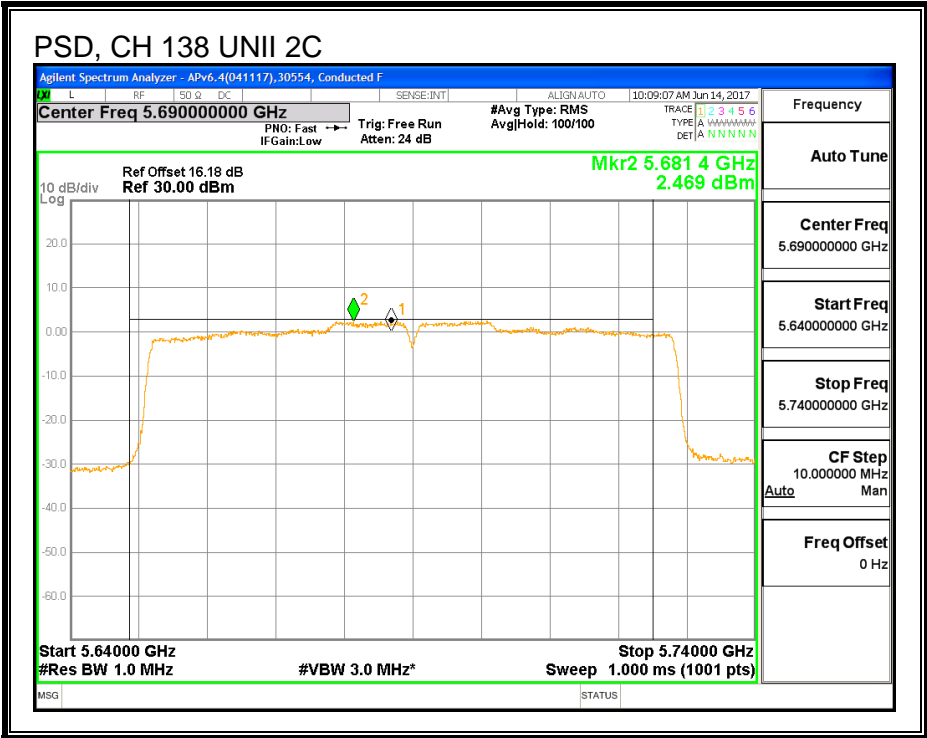
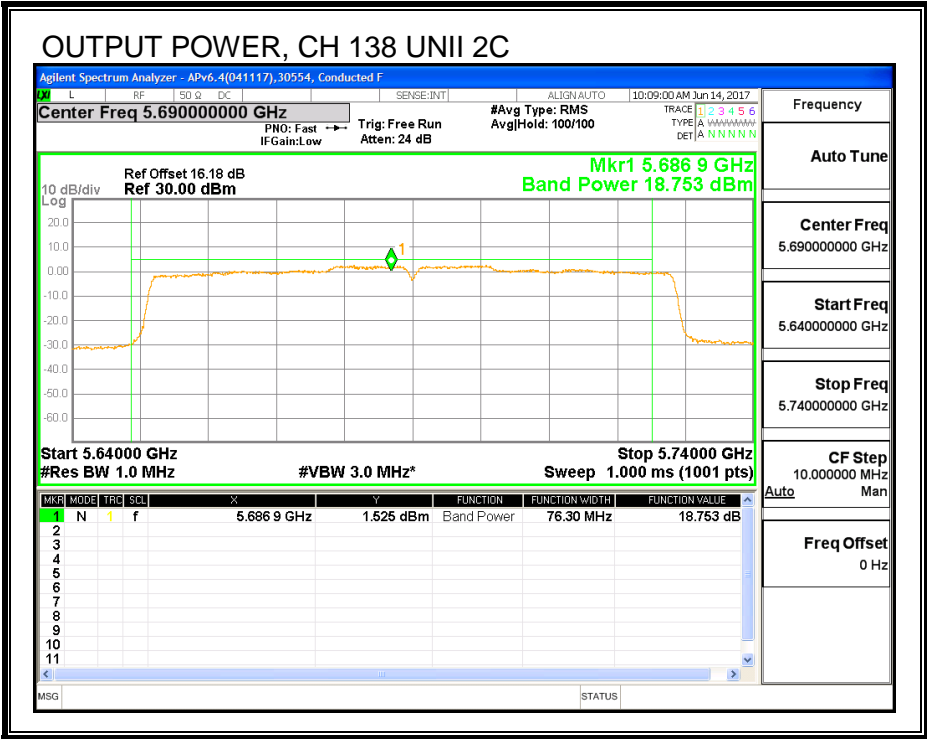
Duty Cycle CF (dB)	0.19	Included in Calculations of Corr'd Power & PSD
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##### Output Power Results

Channel	Frequency (MHz)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	18.75	18.94	24.00	-5.06

##### PSD Results

Channel	Frequency (MHz)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	2.47	2.66	11.00	-8.34



# **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	6.30	-0.93	30.00	30.00

Duty Cycle CF (dB)	0.19	Included in Calculations of Corr'd Power & PSD
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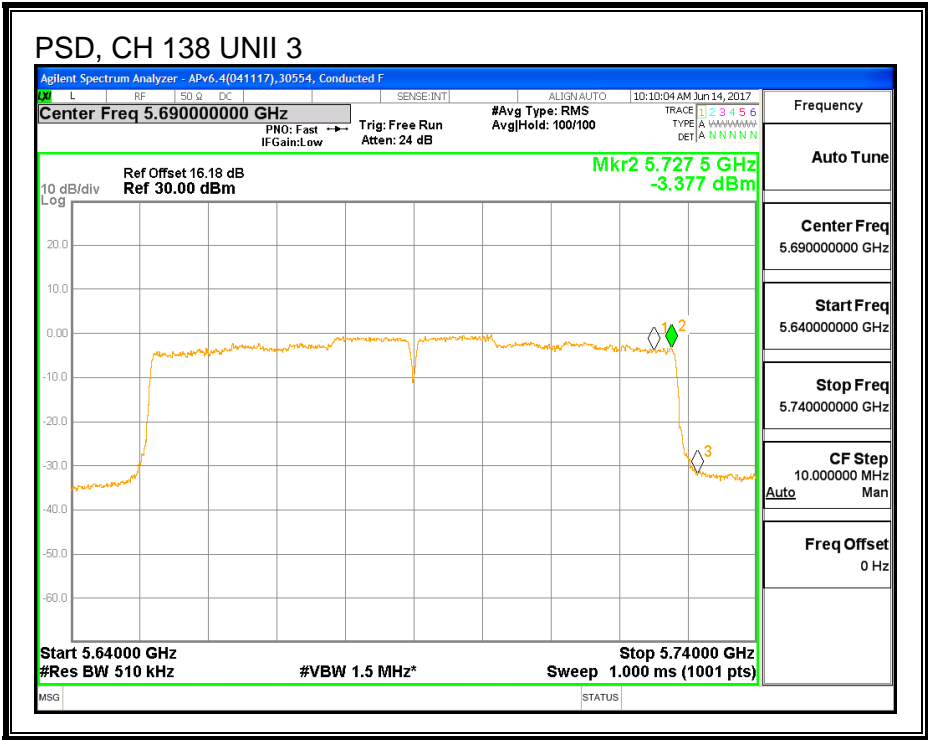
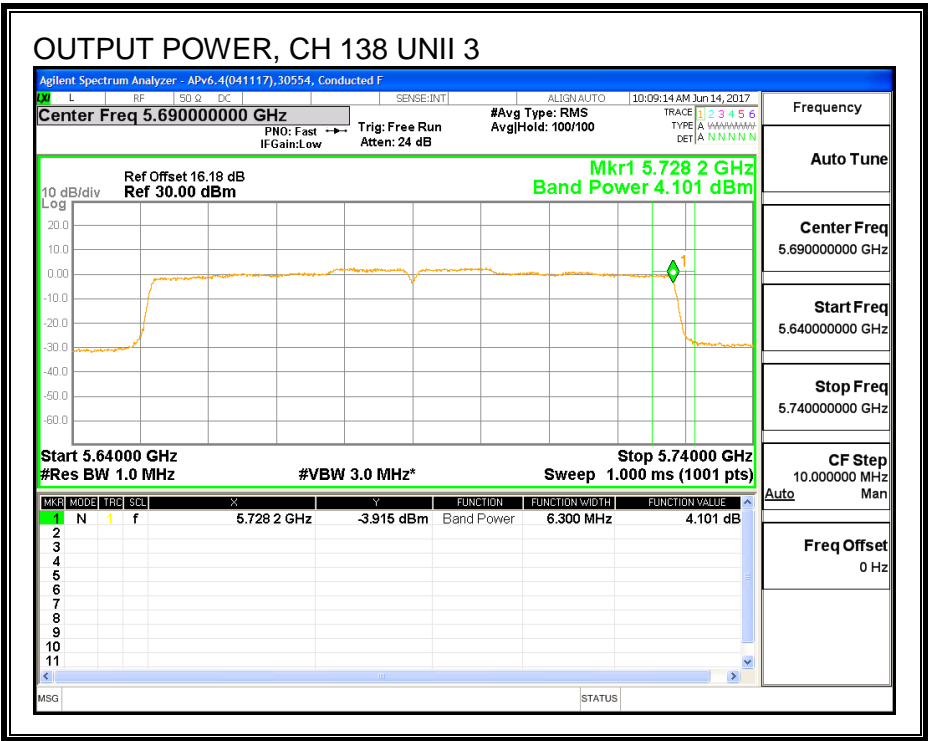
## **Output Power Results**

Channel	Frequency (MHz)	LAT 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
138	5690	4.10	4.29	30.00	-25.71

## **PSD Results**

Channel	Frequency (MHz)	LAT 3 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
138	5690	-3.38	-3.19	30.00	-33.19





8.34.2. 6 dB BANDWIDTH

LIMITS

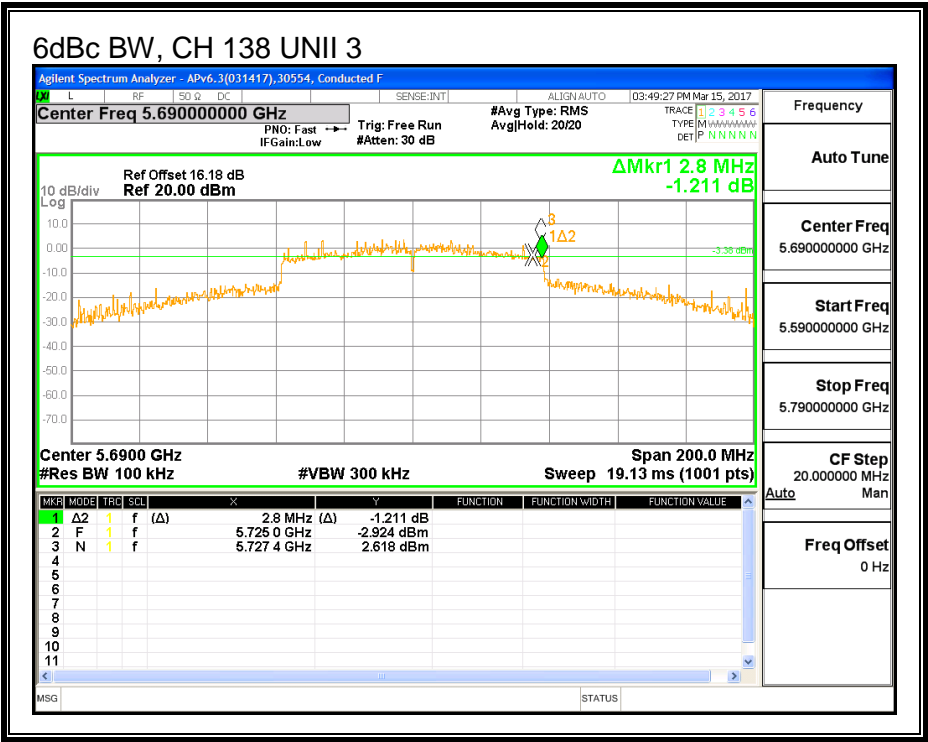
FCC §15.407 (e)

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

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)
High	5690	2.80

6 dB BANDWIDTH



## **8.35. 11ac HT80 2TX CDD MIMO MODE IN THE 5.6GHz BAND**

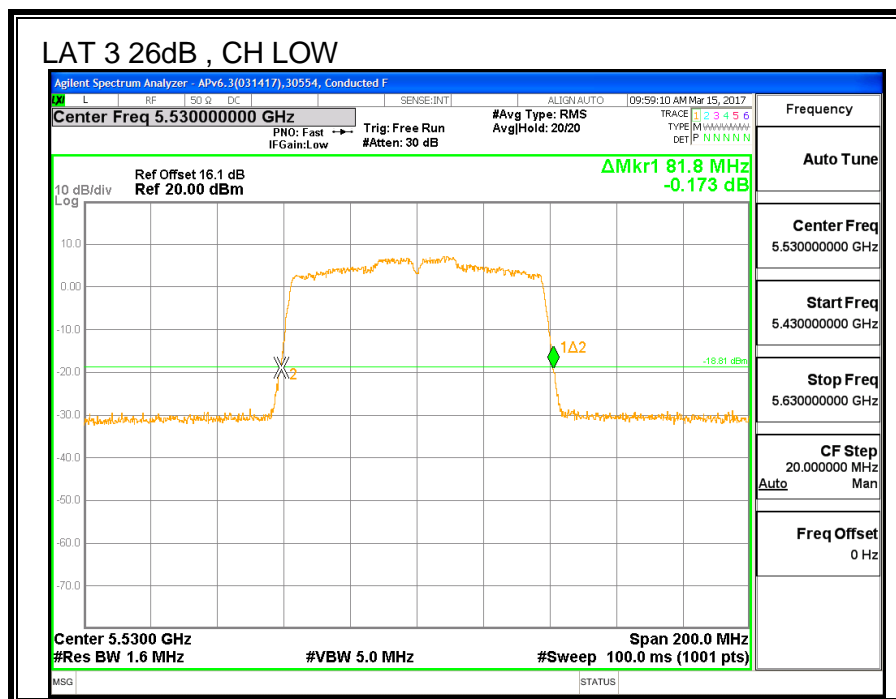
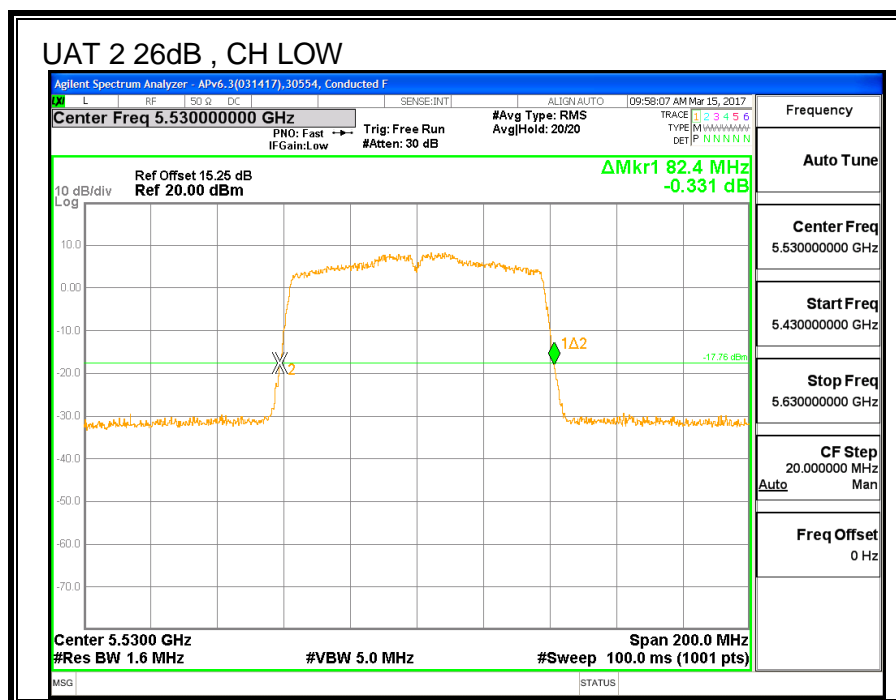
### **8.35.1. 26 dB BANDWIDTH**

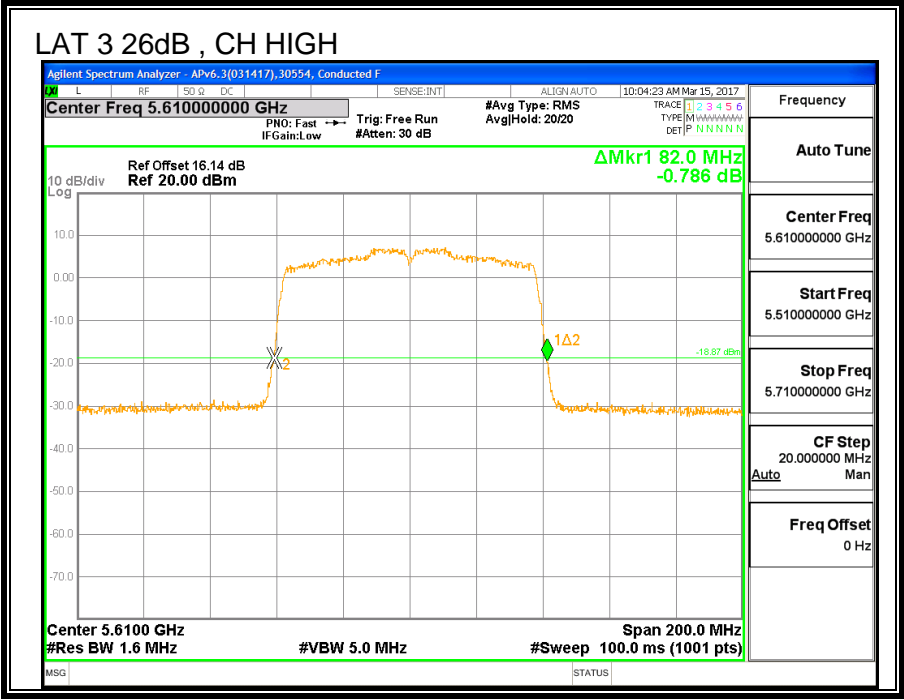
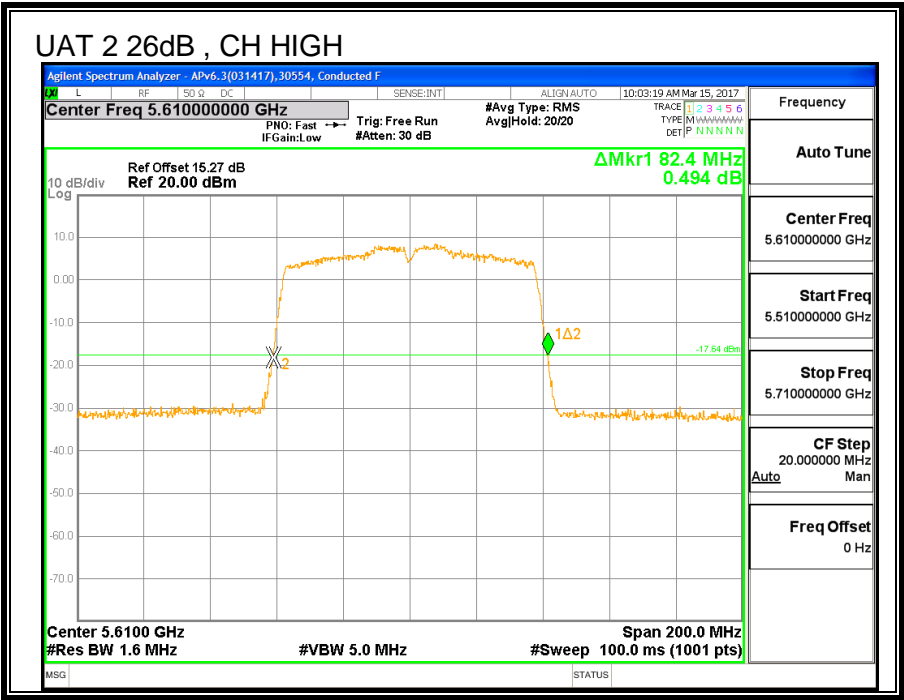
#### **LIMITS**

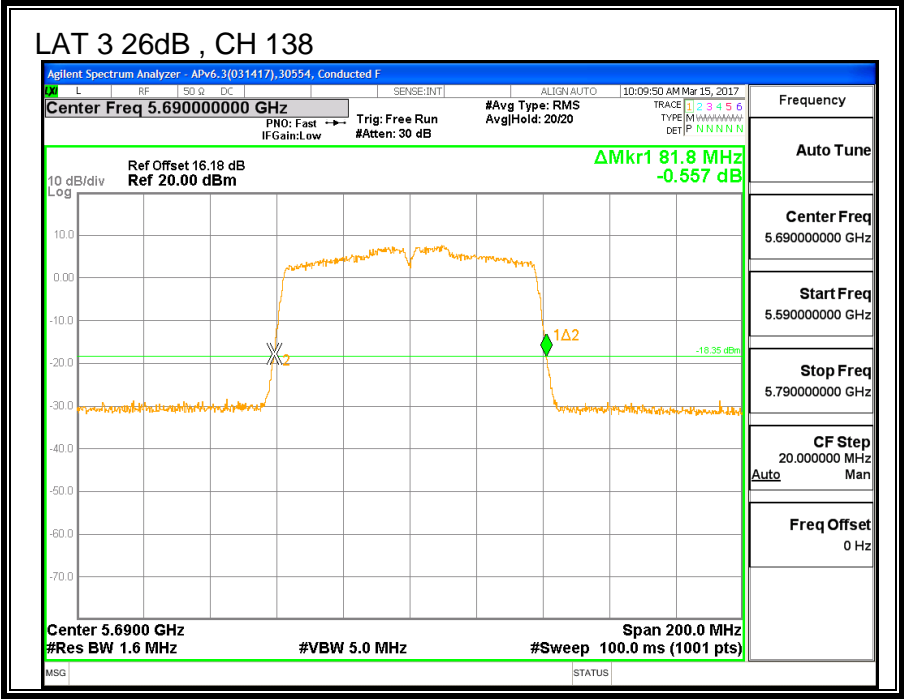
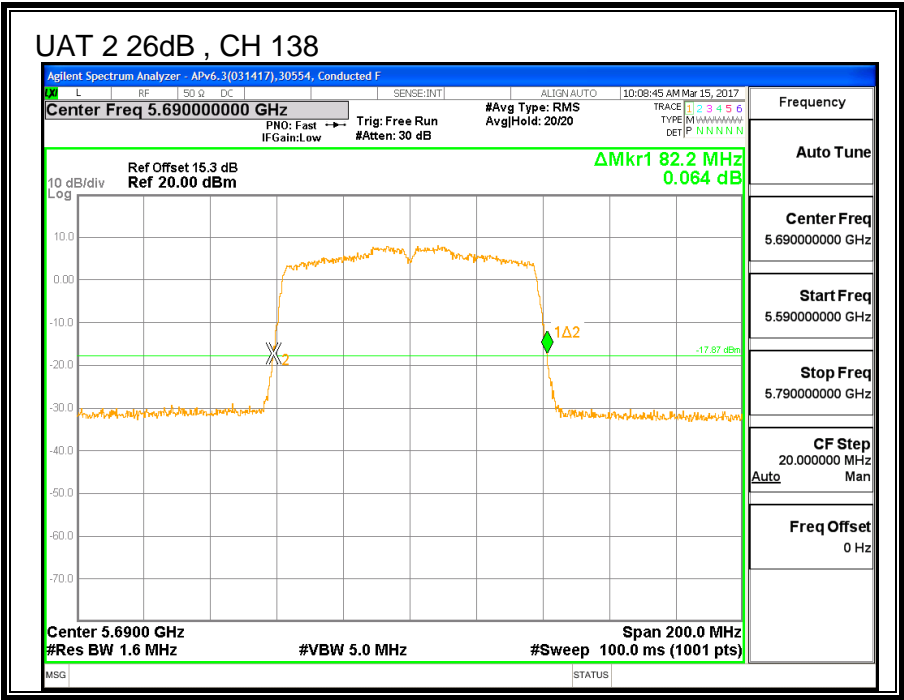
None; for reporting purposes only.

#### **RESULTS**

<b>Channel</b>	<b>Frequency</b>	<b>26 dB BW UAT 2 (MHz)</b>	<b>26 dB BW LAT 3 (MHz)</b>
Low	5530	82.4	81.8
High	5610	82.4	82.0
138	5690	82.2	81.8







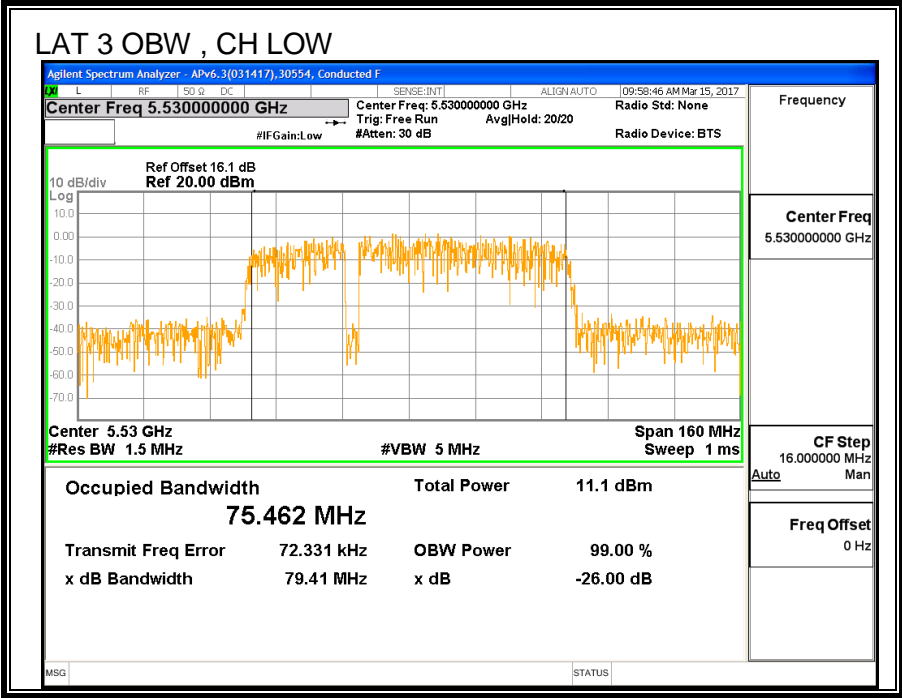
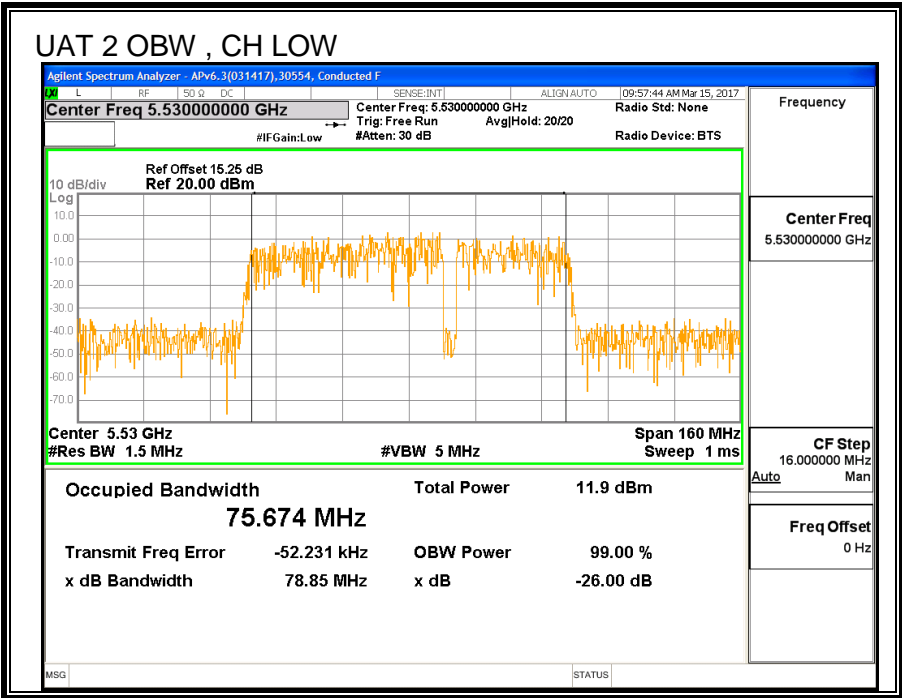
### 8.35.2. 99% BANDWIDTH

#### LIMITS

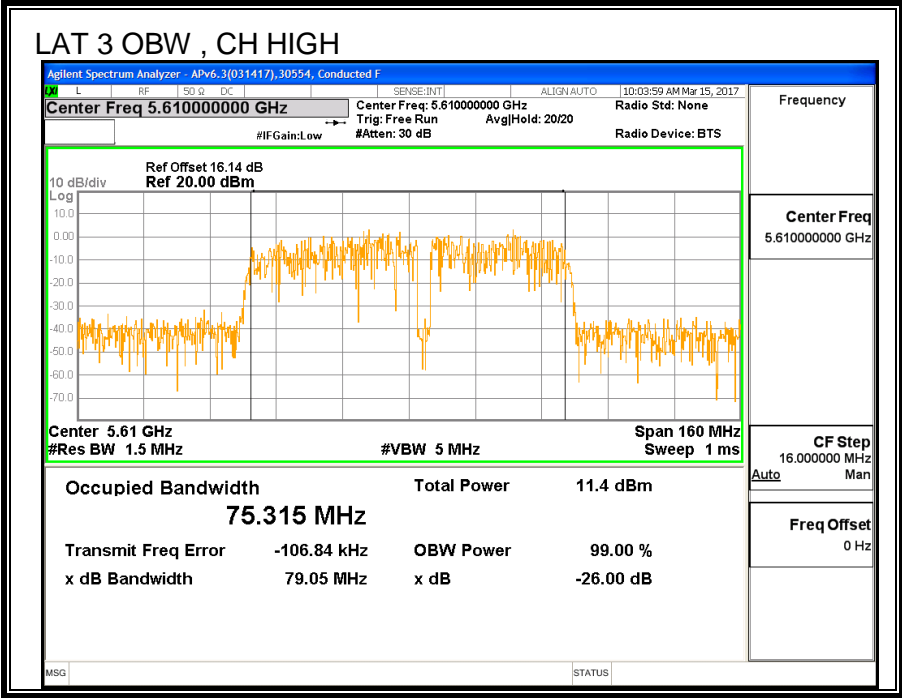
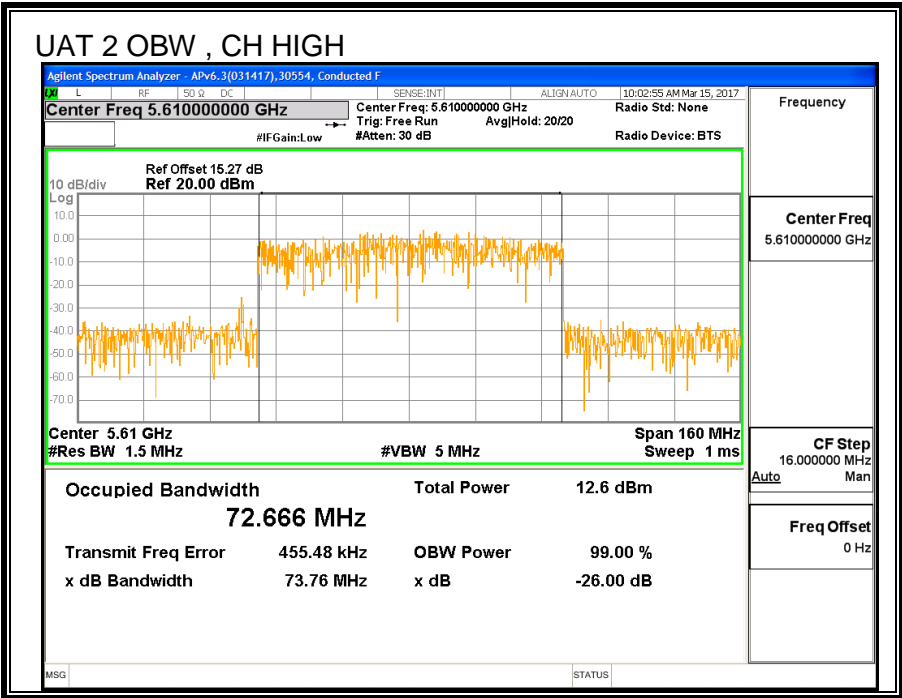
None; for reporting purposes only.

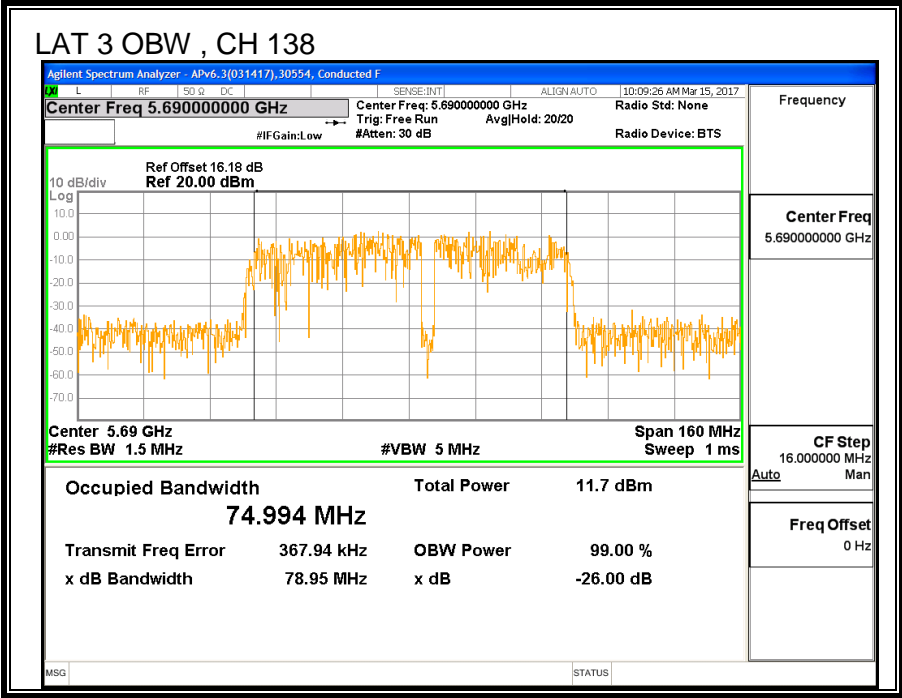
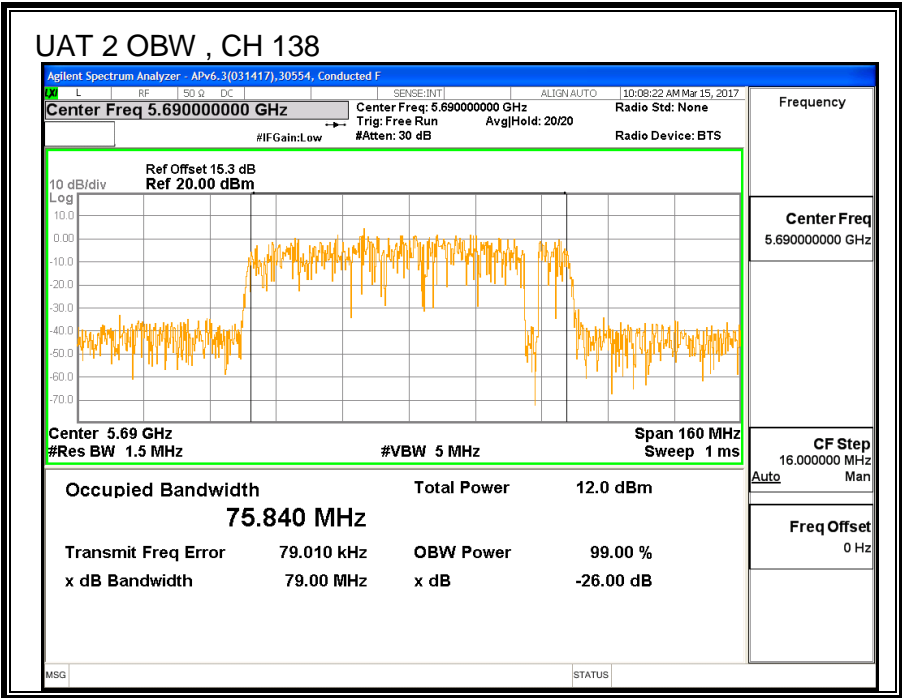
#### RESULTS

Channel	Frequency	99% BW UAT 2 (MHz)	99% BW LAT 3 (MHz)
Low	5530	75.674	75.462
High	5610	72.666	75.315
138	5690	75.840	74.994









### 8.35.3. AVERAGE POWER

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#### 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	5530	13.86	13.79	16.84
Mid	5610	18.93	18.78	21.87
High	5690	18.82	18.77	21.81

#### 8.35.4. 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.

PSD test procedure: KDB 789033 D02 v01r04 Section F (SA-2 method)

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

##### 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

## RESULTS

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### 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	81.80	75.462	-0.85	2.16	24.00	11.00
High	5610	82.00	72.666	-0.85	2.16	24.00	11.00

<b>Duty Cycle CF (dB)</b>	0.19	Included in Calculations of Corr'd PSD
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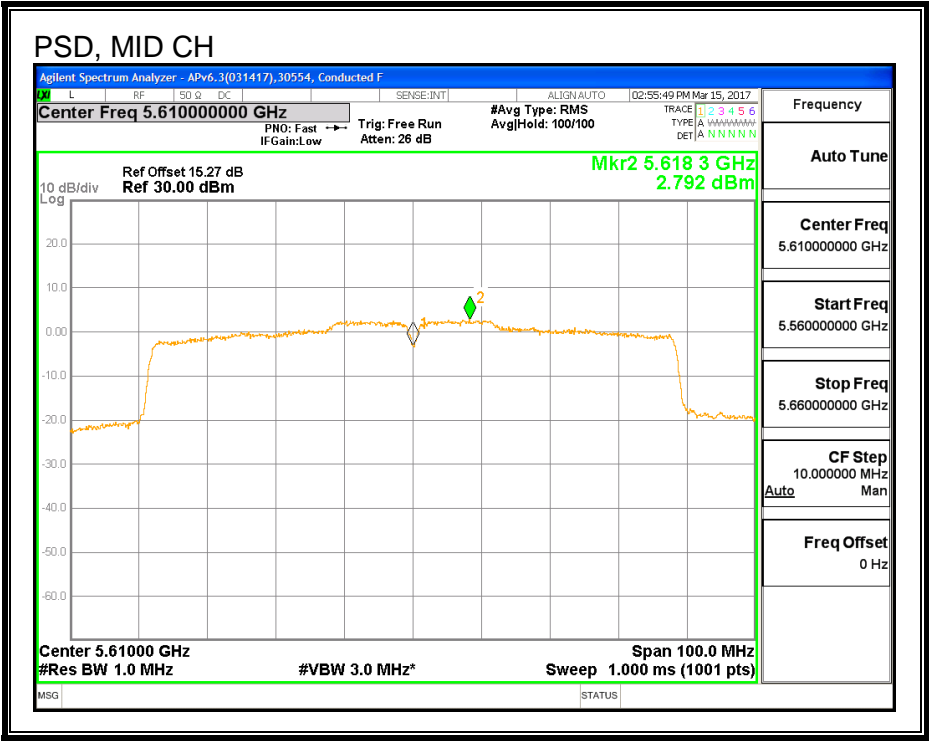
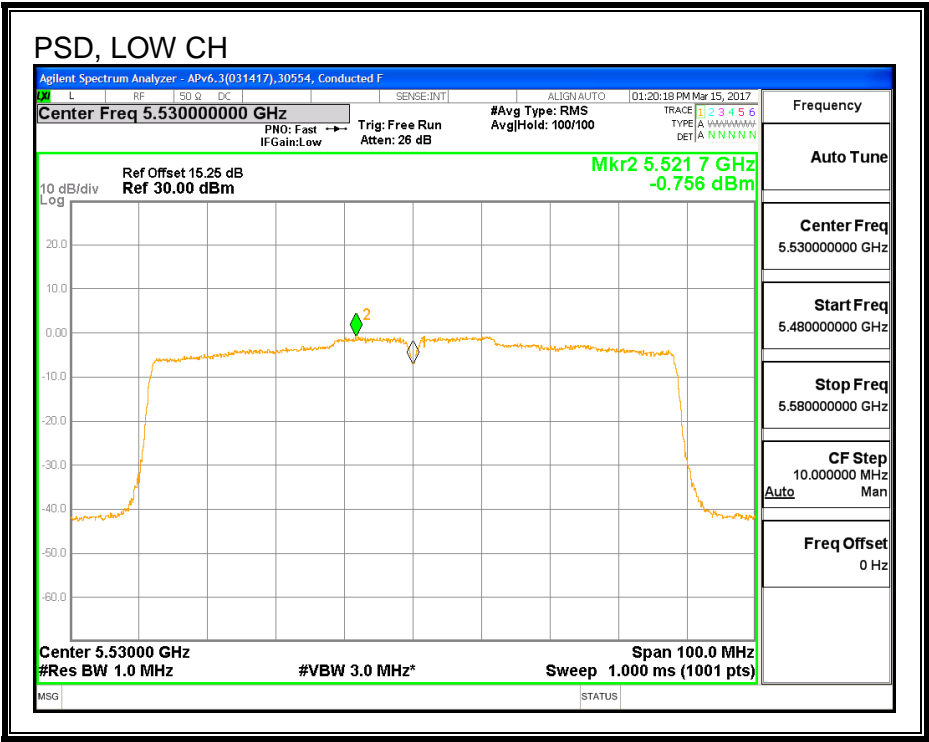
### Output Power Results

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	13.86	13.79	16.84	24.00	-7.16
High	5610	18.93	18.78	21.87	24.00	-2.13

### 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	-0.76	-0.41	2.62	11.00	-8.38
High	5610	2.79	2.33	5.77	11.00	-5.23

PSD, UAT 2



PSD, LAT 3

