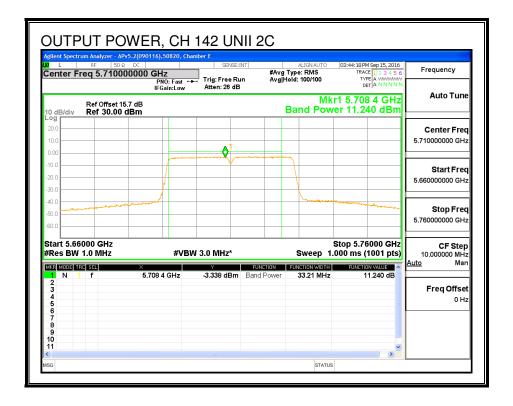
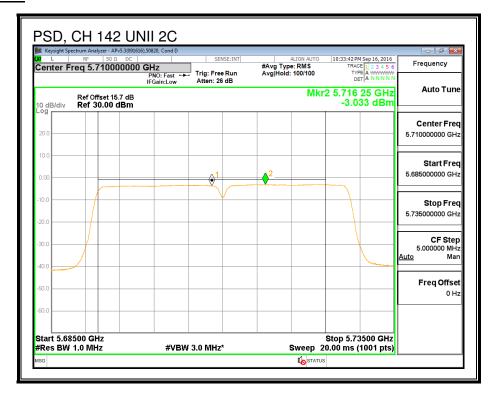
### **OUTPUT POWER, CHAIN 2**

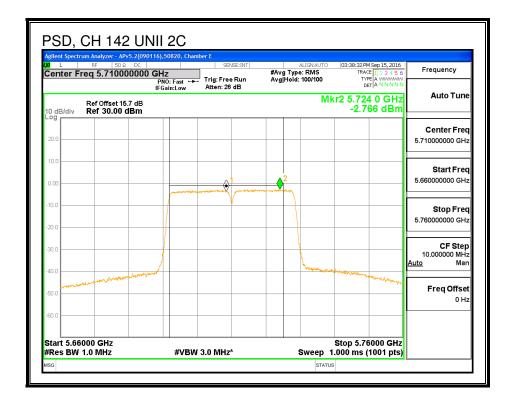


### **PSD, CHAIN 0**

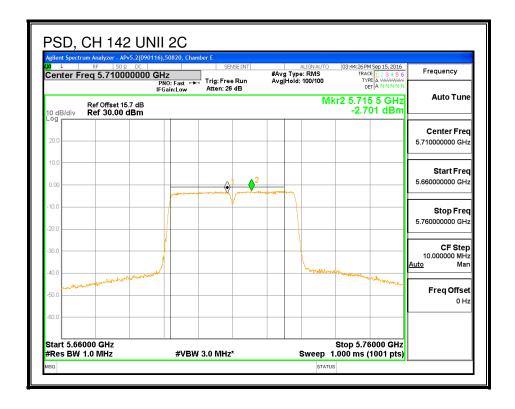


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### PSD, CHAIN 1



### **PSD, CHAIN 2**



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## **UNII-3 BAND**

### **Antenna Gain and Limit**

Channel	Frequency	Min	Directional	Directional	Power	PSD
		99%	Gain	Gain	Limit	Limit
		BW	For Power	For PSD		
	(MHz)	(MHz)	(dBi)	(dBi)	(dBm)	(dBm)
142	5710	3.165	10.68	10.68	25.32	25.32

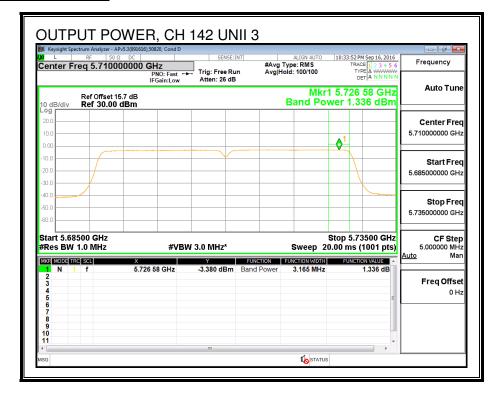
Duty Cycle CF (dB) 0.	58	Included in Calculations of Corr'd Power & PSD
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### **Output Power Results**

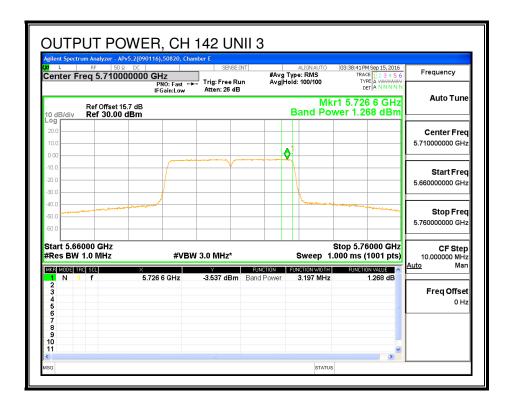
Channel	Frequency	Chain 0	Chain 1	Chain 2	Total	Power	Power
		Meas	Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
142	5710	1.34	1.27	1.35	6.67	25.32	-18.65

_								
	Channel	Frequency	Chain 0	Chain 1	Chain 2	Total	PSD	PSD
			Meas	Meas	Meas	Corr'd	Limit	Margin
			PSD	PSD	PSD	PSD		
		(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
	142	5710	-5.91	-5.48	-5.46	-0.26	25.32	-25.58

### **OUTPUT POWER, CHAIN 0**

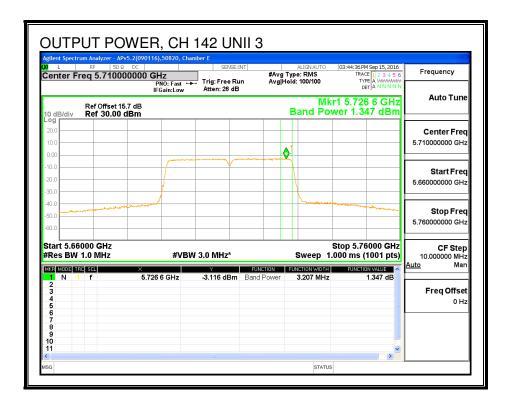


### **OUTPUT POWER, CHAIN 1**

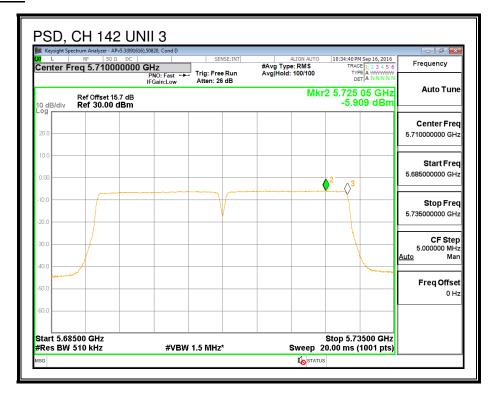


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### **OUTPUT POWER, CHAIN 2**

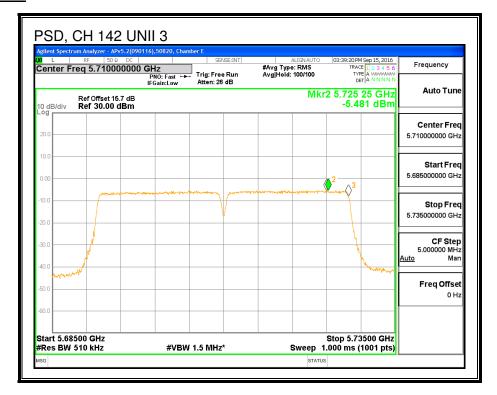


### **PSD, CHAIN 0**

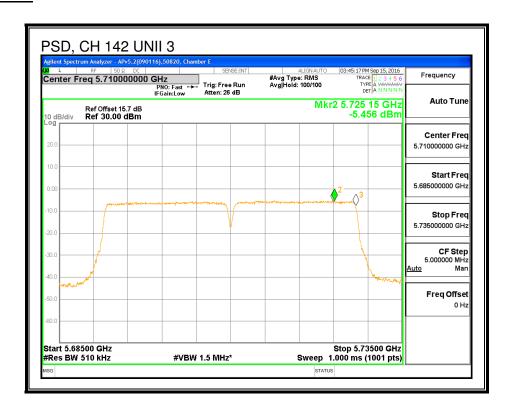


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### PSD, CHAIN 1



### PSD, CHAIN 2



## 8.90.2. **6 dB BBANDWIDTH**

## **LIMITS**

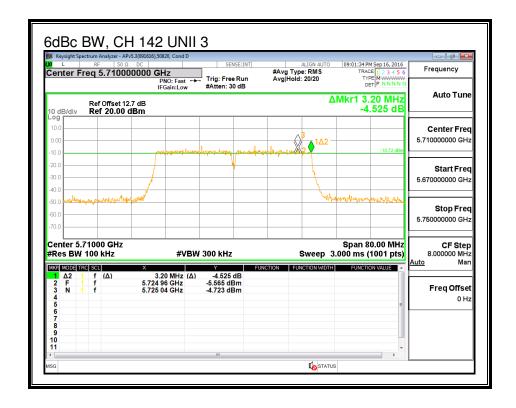
FCC §15.407 (e)

IC RSS-247 (6.2.4) (1)

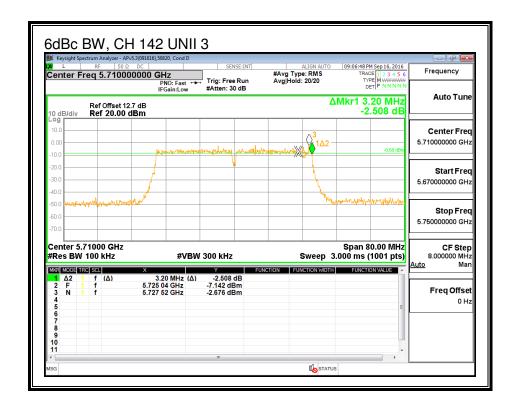
The minimum 6 dB bandwidth shall be at least 500 kHz.

Channel	Frequency	6 dB BW	6 dB BW	6 dB BW
		Chain 0	Chain 1	Chain 2
	(MHz)	(MHz)	(MHz)	(MHz)
142	5710	3.200	3.200	3.200

### **CHAIN 0**

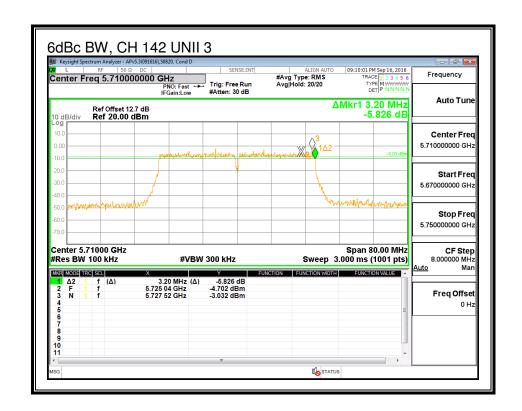


### **CHAIN 1**



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### **CHAIN 2**



#### 802.11ac VHT80 CHAIN 0 MODE IN THE 5.6 GHz BAND 8.91.

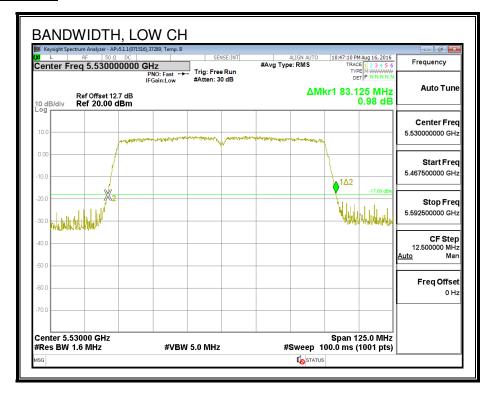
## 8.91.1. **26 dB BANDWIDTH**

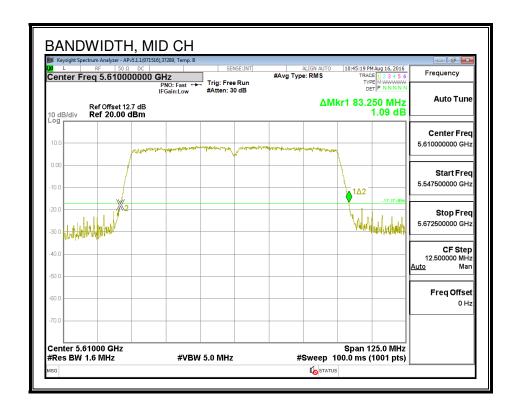
## **LIMITS**

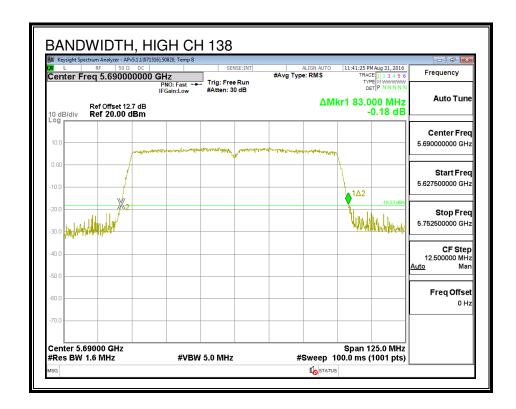
None; for reporting purposes only.

Channel	Frequency	26 dB Bandwidth
	(MHz)	(MHz)
Low	5530	83.125
Mid	5610	83.250
High	5690	83.00

### **26 dB BANDWIDTH**







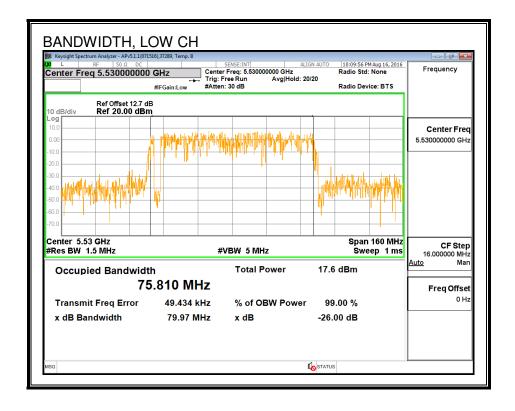
## 8.91.2. **99% BANDWIDTH**

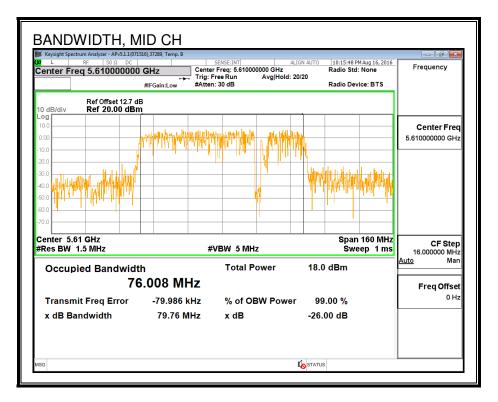
## **LIMITS**

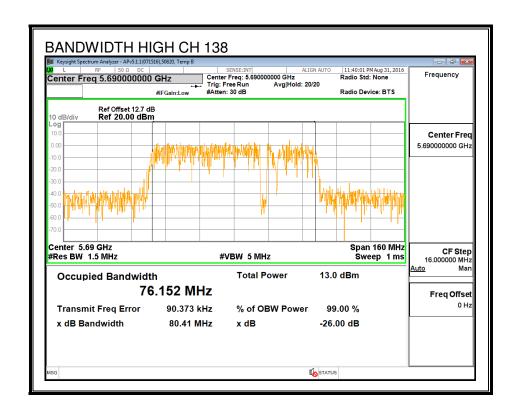
None; for reporting purposes only.

Frequency	99% Bandwidth
(MHz)	(MHz)
5530	75.810
5610	76.008
5690	76.152

### 99% BANDWIDTH







## 8.91.3. AVERAGE POWER

## **LIMITS**

None; for reporting purposes only.

## **TEST PROCEDURE**

Measurements perform using a wideband gated RF power meter.

|--|

Channel	Frequency	Power
	(MHz)	(dBm)
Low	5530	12.24
Mid	5610	12.18
High	5690	12.06

### 8.91.4. OUTPUT POWER AND PSD

### **LIMITS**

FCC §15.407 (a) (2)

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

IC RSS-247 (6.2.3) (1)

The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

## **TEST PROCEDURE**

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

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

### **DIRECTIONAL ANTENNA GAIN**

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

## **RESULTS**

ID:	30554	Date:	9/13/16
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Channel	Frequency	Min	Min	Directional	Power	PSD
		26 dB	99%	Gain	Limit	Limit
		BW	BW			
	(MHz)	(MHz)	(MHz)	(dBi)	(dBm)	(dBm)
Low	5530	83.125	75.810	4.90	24.00	11.00
Mid	5610	83.250	76.008	4.90	24.00	11.00

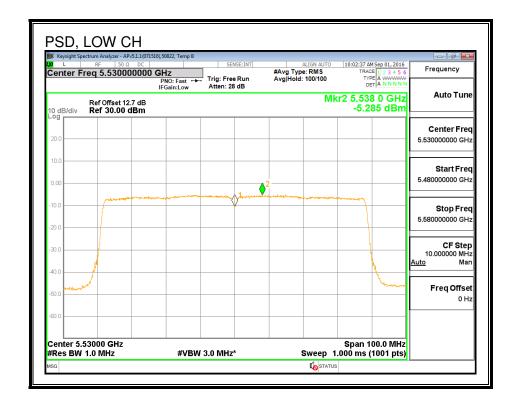
Duty Cycle CF (dB) 0.09	Included in Calculations of Corr'd PSD
-------------------------	--

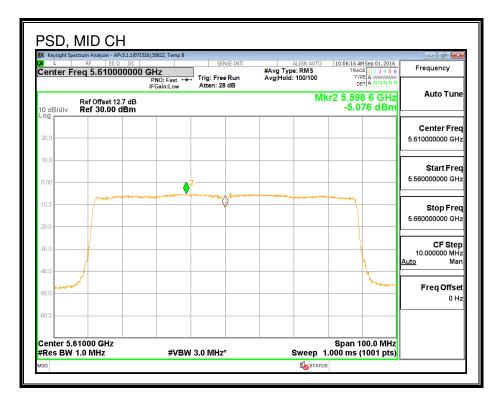
## **Output Power Results**

Channel	Frequency	Chain 0	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	5530	12.24	12.24	24.00	-11.76

Channel	Frequency	Chain 0	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	(MHz) 5530	( <b>dBm</b> ) -5.285	( <b>dBm</b> ) -5.20	( <b>dBm</b> ) 11.00	( <b>dB</b> ) -16.20

### **PSD**





# 8.91.5. STRADDLE CHANNEL 138 RESULTS (FCC)

## **UNII-2C BAND**

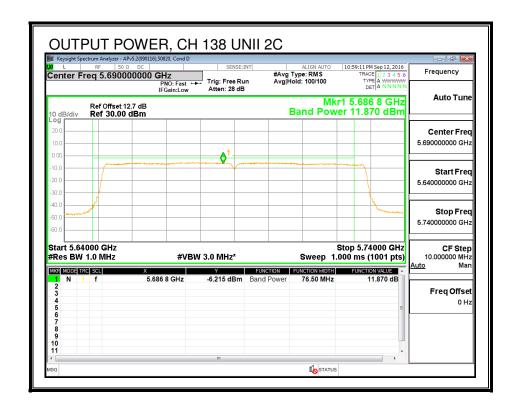
## Bandwidth, Antenna Gain, and Limits

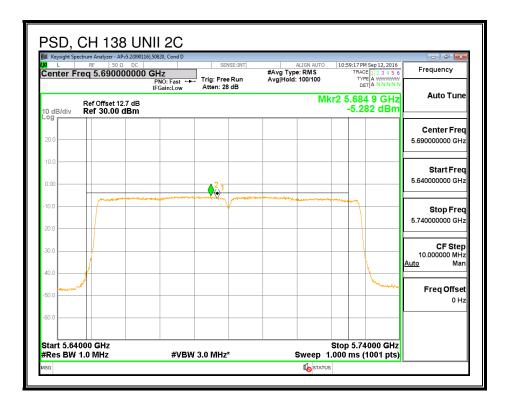
Channel	Frequency	Min	Directional	Directional	Power	PSD
		26 dB	Gain	Gain	Limit	Limit
		BW	for Power	for PSD		
	(MHz)	(MHz)	(dBi)	(dBi)	(dBm)	(dBm)
138	5690	76.50	4.90	4.90	24.00	11.00

### **Output Power Results**

Channel	Frequency	Chain 0	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
138	5690	11.87	11.96	24.00	-12.04

Channel	Frequency	Chain 0	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
138	5690	-5.28	-5.19	11.00	-16.19





## **UNII-3 BAND**

### **Antenna Gain and Limit**

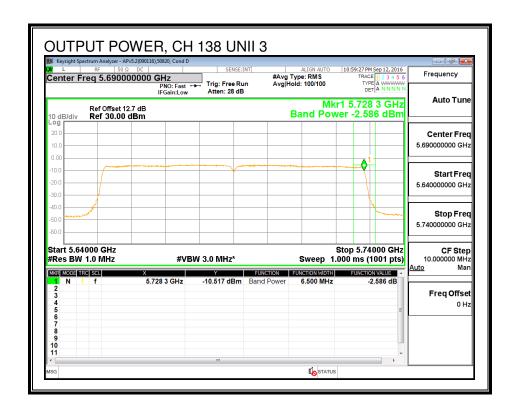
Channel	Frequency	Min	Directional	Power	PSD
		26 dB BW	Gain	Limit	Limit
	(MHz)	(MHz)	(dBi)	(dBm)	(dBm)
138	5690	6.50	4.90	30.00	30.00

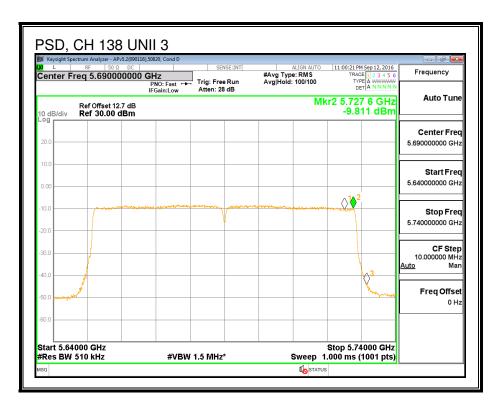
Duty Cycle CF (dB) 0.09	Included in Calculations of Corr'd Power & PSD
-------------------------	--

## **Output Power Results**

Channel	Frequency	Chain 0	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
138	5690	-2.59	-2.50	30.00	-32.50

Channel	Frequency	Chain 0	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
138	5690	-9.81	-9.72	30.00	-39.72





## 8.91.6. STRADDLE CHANNEL 138 RESULTS (IC)

## **UNII-2C BAND**

## Bandwidth, Antenna Gain, and Limits

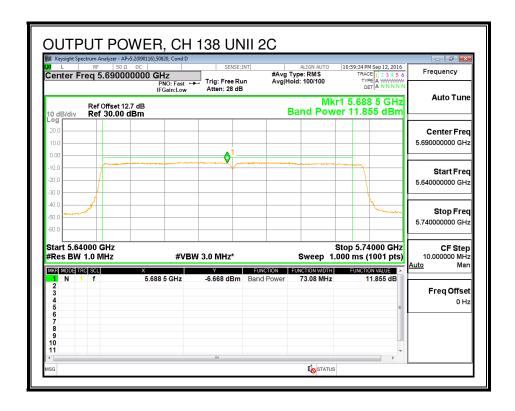
Channel	Frequency	Min	Directional	Directional	Power	PSD
		99%	Gain	Gain	Limit	Limit
		BW	for Power	for PSD		
	(MHz)	(MHz)	(dBi)	(dBi)	(dBm)	(dBm)
138	5690	73.080	4.90	4.90	24.00	11.00

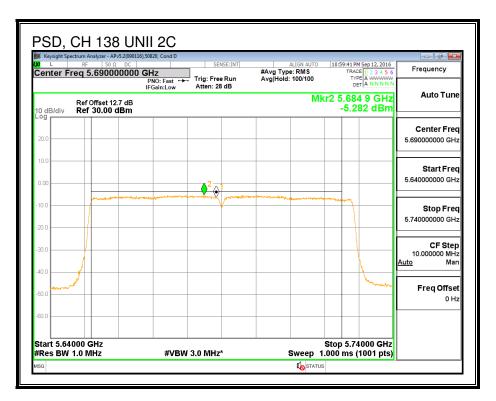
Duty Cycle CF (dB) 0.09	Included in Calculations of Corr'd Power & PSD
-------------------------	--

### **Output Power Results**

Channel	Frequency	Chain 0	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
138	5690	11.86	11.95	24.00	-12.06

Channel	Frequency	Chain 0	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
138	5690	-5.28	-5.19	11.00	-16.19





## **UNII-3 BAND**

### **Antenna Gain and Limit**

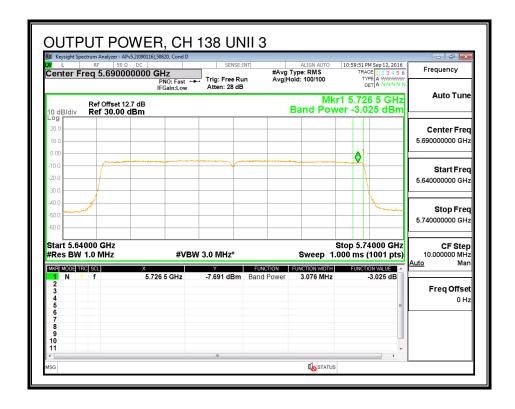
Channel	Frequency	Min	Directional	Power	PSD
		99%	Gain	Limit	Limit
		BW			
	(MHz)	(MHz)	(dBi)	(dBm)	(dBm)
138	5690	3.076	4.90	30.00	30.00

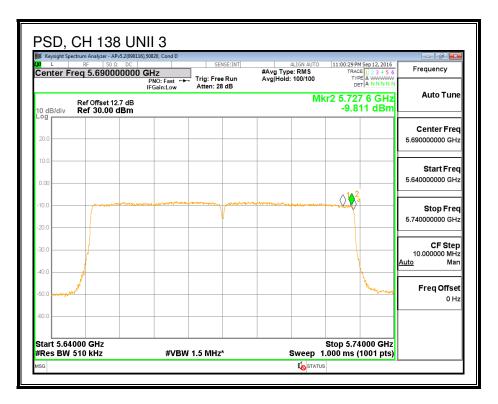
Duty Cycle CF (dB) 0.09	Included in Calculations of Corr'd Power & PSD
-------------------------	--

## **Output Power Results**

Channel	Frequency	Chain 0	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
138	5690	-3.03	-2.94	30.00	-32.94

Channel	Frequency	Chain 0	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
138	5690	-9.81	-9.72	30.00	-39.72





### 8.91.7. **6 dB BANDWIDTH**

### **LIMITS**

FCC §15.407 (e)

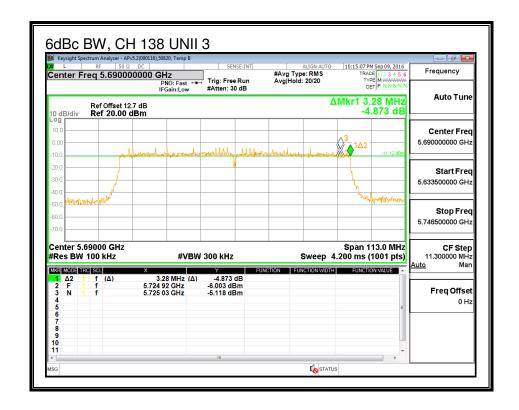
IC RSS-247 (6.2.4) (1)

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

## **RESULTS**

Channel	Frequency	6 dB Bandwidth
	(MHz)	(MHz)
High	5690	3.28

### **6 dB BANDWIDTH**



## 8.92. 802.11ac VHT80 CHAIN 1 MODE IN THE 5.6 GHz BAND

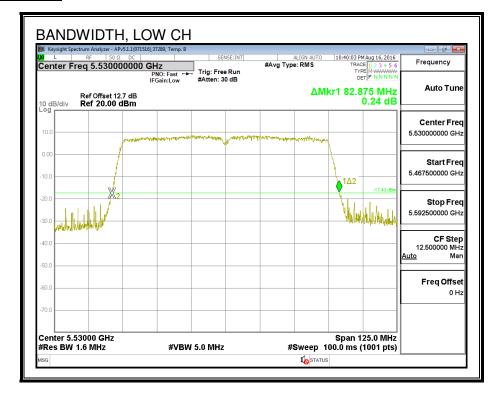
## 8.92.1. **26 dB BANDWIDTH**

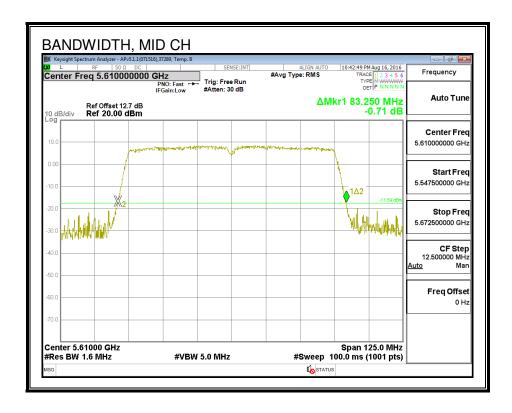
## **LIMITS**

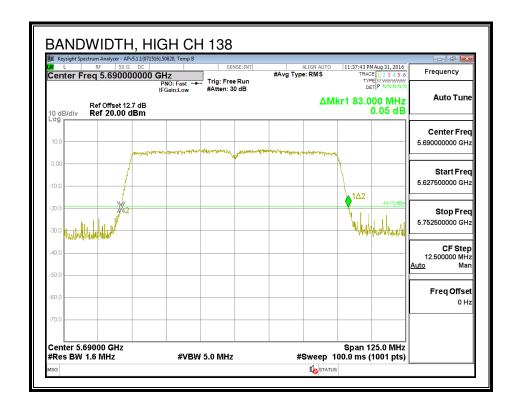
None; for reporting purposes only.

Channel	Frequency	26 dB Bandwidth
	(MHz)	(MHz)
Low	5530	82.875
Mid	5610	83.250
High	5690	83.00

### **26 dB BANDWIDTH**







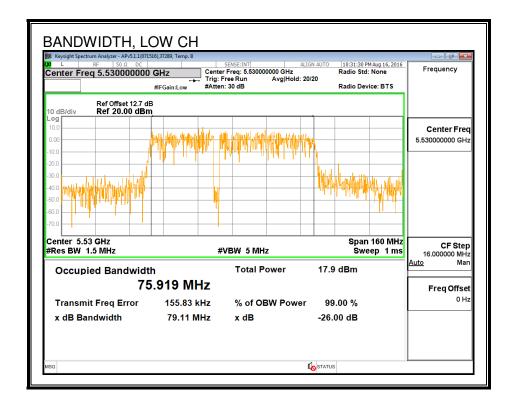
## 8.92.2. **99% BANDWIDTH**

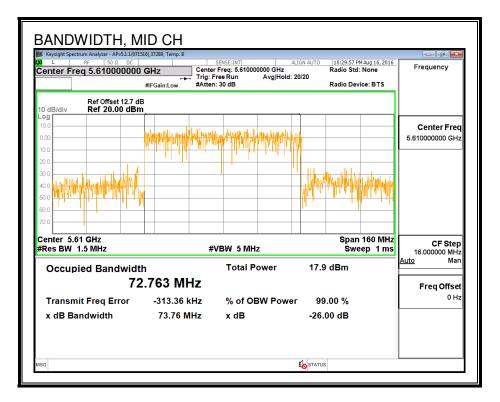
## **LIMITS**

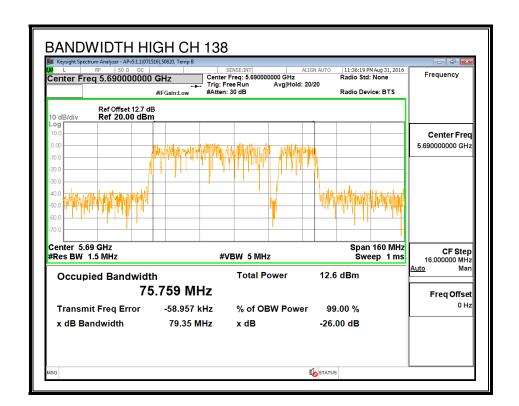
None; for reporting purposes only.

Frequency	99% Bandwidth
(MHz)	(MHz)
5530	75.919
5610	72.763
5690	75.759

### 99% BANDWIDTH







## 8.92.3. AVERAGE POWER

## **LIMITS**

None; for reporting purposes only.

## **TEST PROCEDURE**

Measurements perform using a wideband gated RF power meter.

ID:	30554	Date:	9/13/16

Channel	Frequency	Power
	(MHz)	(dBm)
Low	5530	12.19
Mid	5610	12.17
High	5690	12.17

#### 8.92.4. OUTPUT POWER AND PSD

#### **LIMITS**

FCC §15.407 (a) (2)

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

IC RSS-247 (6.2.3) (1)

The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

# **TEST PROCEDURE**

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

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

# **DIRECTIONAL ANTENNA GAIN**

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

# **RESULTS**

ID:	30554	Date:	9/13/16
-----	-------	-------	---------

# Bandwidth, Antenna Gain, and Limits

Channel	Frequency	Min	Min	Directional	Power	PSD
		26 dB	99%	Gain	Limit	Limit
		BW	BW			
	(MHz)	(MHz)	(MHz)	(dBi)	(dBm)	(dBm)
Low	5530	82.875	75.919	7.40	24.00	9.60
Mid	5610	83.250	72.763	7.40	24.00	9.60

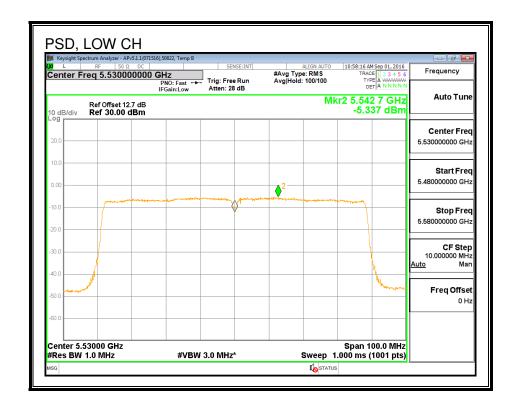
Duty Cycle CF (dB) 0.09	Included in Calculations of Corr'd PSD
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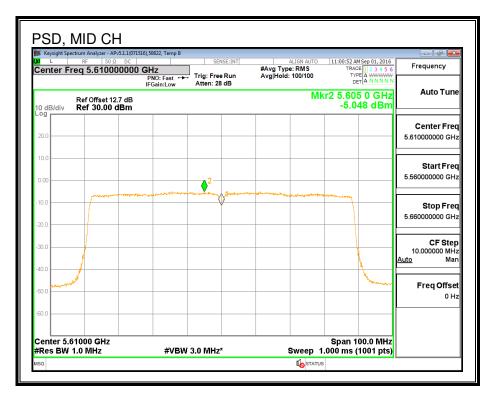
# **Output Power Results**

Channel	Frequency	Chain 1	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	( <b>MHz</b> ) 5530	(dBm) 12.19	( <b>dBm</b> ) 12.19	(dBm) 24.00	( <b>dB</b> ) -11.81

Channel	Frequency	Chain 1	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
	` ,	` ,			• •
Low	5530	-5.337	-5.25	9.60	-14.85

#### **PSD**





# 8.92.5. STRADDLE CHANNEL 138 RESULTS (FCC)

#### **UNII-2C BAND**

# Bandwidth, Antenna Gain, and Limits

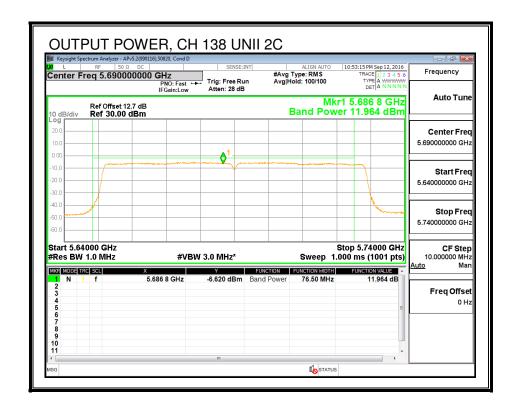
Channel	Frequency	Min	Directional	Directional	Power	PSD
		26 dB	Gain	Gain	Limit	Limit
		BW	for Power	for PSD		
	(MHz)	(MHz)	(dBi)	(dBi)	(dBm)	(dBm)
138	5690	76.50	7.40	7.40	22.60	9.60

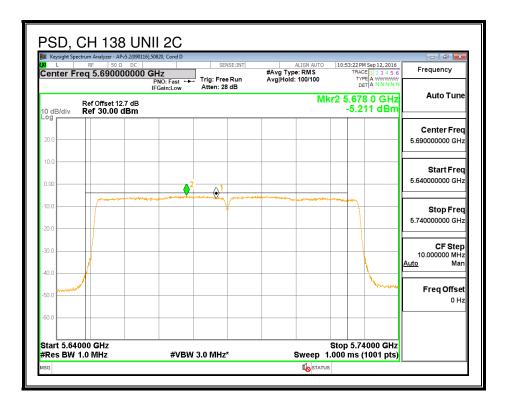
Duty Cycle CF (dB) 0.09	Included in Calculations of Corr'd Power & PSD
-------------------------	--

#### **Output Power Results**

Channel	Frequency	Chain 1	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
138	5690	11.96	12.05	22.60	-10.55

Channel	Frequency	Chain 1	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
138	5690	-5.21	-5.12	9.60	-14.72





# **UNII-3 BAND**

#### **Antenna Gain and Limit**

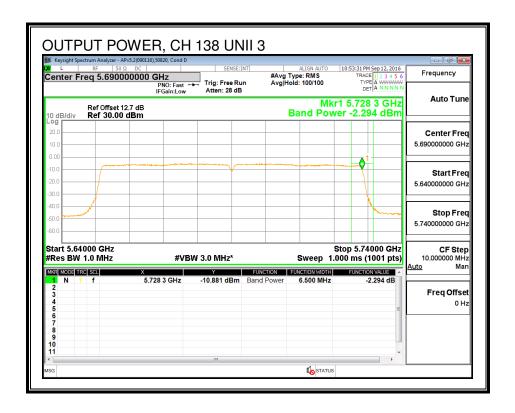
Channel	Frequency	Min	Directional	Power	PSD
		26 dB BW	Gain	Limit	Limit
	(MHz)	(MHz)	(dBi)	(dBm)	(dBm)
138	5690	6.50	7.40	28.60	28.60

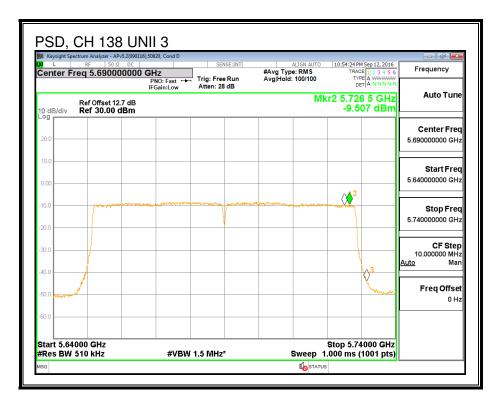
Duty Cycle CF (dB) 0.09	Included in Calculations of Corr'd Power & PSD
-------------------------	--

# **Output Power Results**

Channel	Frequency	Chain 1	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
138	5690	-2.29	-2.20	28.60	-30.80

Channel	Frequency	Chain 1	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
138	5690	-9.51	-9.42	28.60	-38.02





# 8.92.6. STRADDLE CHANNEL 138 RESULTS (IC)

# **UNII-2C BAND**

# Bandwidth, Antenna Gain, and Limits

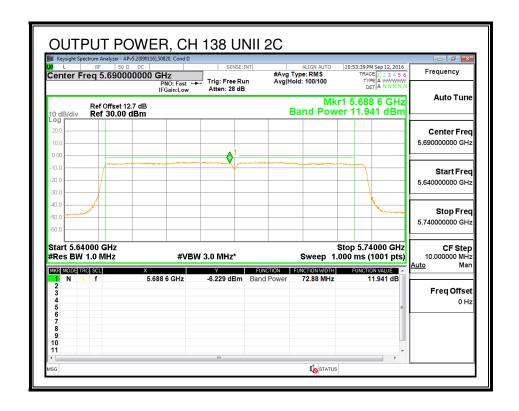
Channel	Frequency	Min	Directional	Directional	Power	PSD
		99%	Gain	Gain	Limit	Limit
		BW	for Power	for PSD		
	(MHz)	(MHz)	(dBi)	(dBi)	(dBm)	(dBm)
138	5690	72.880	7.40	7.40	22.60	9.60

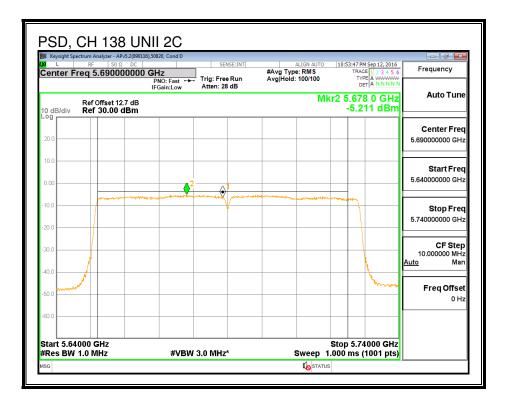
Duty Cycle CF (dB) 0.09	Included in Calculations of Corr'd Power & PSD
-------------------------	--

#### **Output Power Results**

Channel	Frequency	Chain 1	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
138	5690	11.94	12.03	22.60	-10.57

Channel	Frequency	Chain 1	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
138	5690	-5.21	-5.12	9.60	-14.72





# **UNII-3 BAND**

#### **Antenna Gain and Limit**

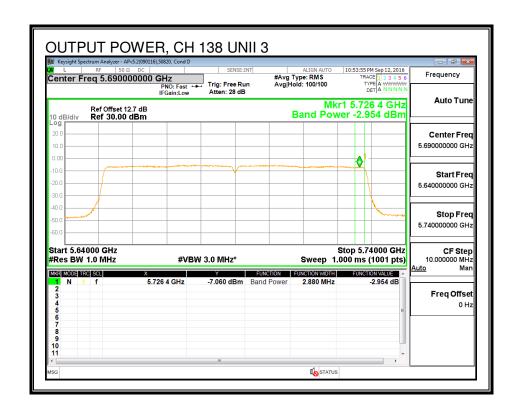
Channel	Frequency	Min	Directional	Power	PSD
		99%	Gain	Limit	Limit
		BW			
	(MHz)	(MHz)	(dBi)	(dBm)	(dBm)
138	5690	2.880	7.40	28.60	28.60

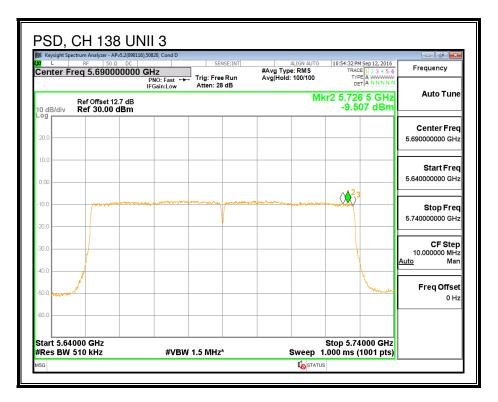
Duty Cycle CF (dB) 0.09	Included in Calculations of Corr'd Power & PSD
-------------------------	--

# **Output Power Results**

Channel	Frequency	Chain 1	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
138	5690	-2.95	-2.86	28.60	-31.46

Channel	Frequency	Chain 1	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
138	5690	-9.51	-9.42	28.60	-38.02





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#### 8.92.7. **6 dB BANDWIDTH**

# **LIMITS**

FCC §15.407 (e)

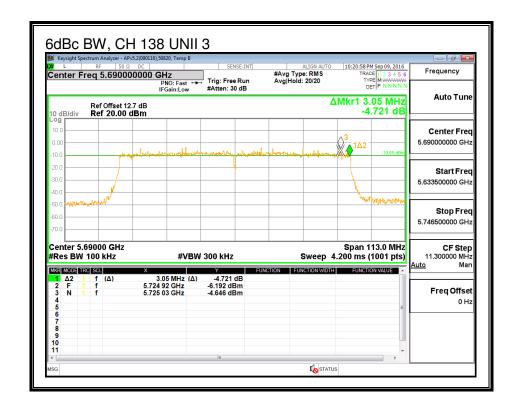
IC RSS-247 (6.2.4) (1)

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

# **RESULTS**

Channel	Frequency	6 dB Bandwidth
	(MHz)	(MHz)
High	5690	3.05

#### **6 dB BANDWIDTH**



# 8.93. 802.11ac VHT80 CHAIN 2 MODE IN THE 5.6 GHz BAND

# 8.93.1. **26 dB BANDWIDTH**

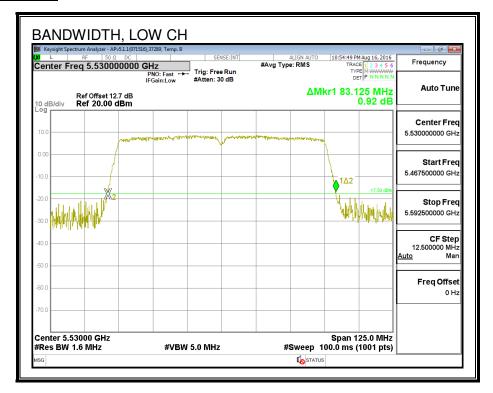
# **LIMITS**

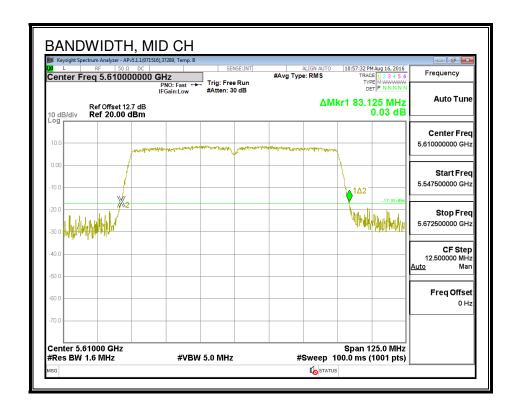
None; for reporting purposes only.

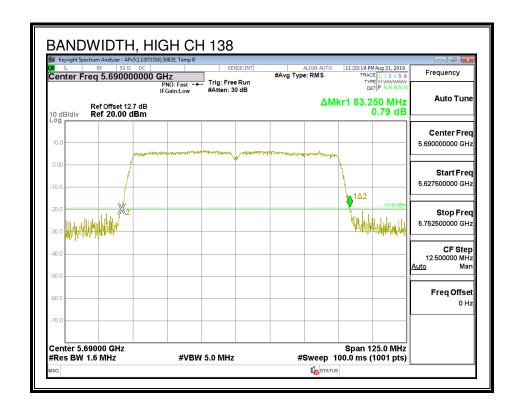
# **RESULTS**

Channel Frequency		26 dB Bandwidth
	(MHz)	(MHz)
Low	5530	83.125
Mid	5610	83.125
High	5690	83.250

#### **26 dB BANDWIDTH**







# 8.93.2. **99% BANDWIDTH**

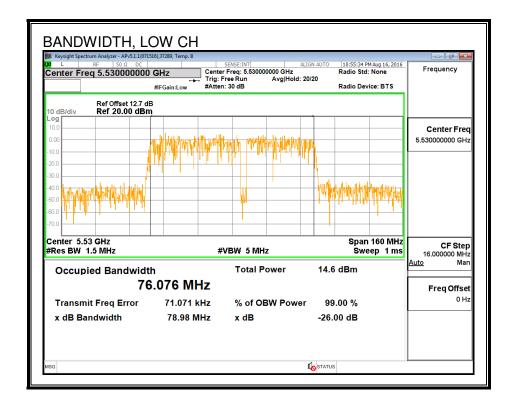
# **LIMITS**

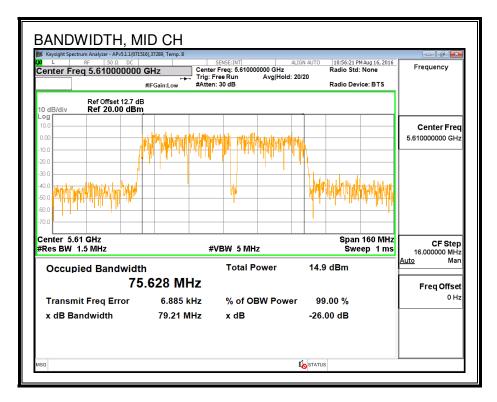
None; for reporting purposes only.

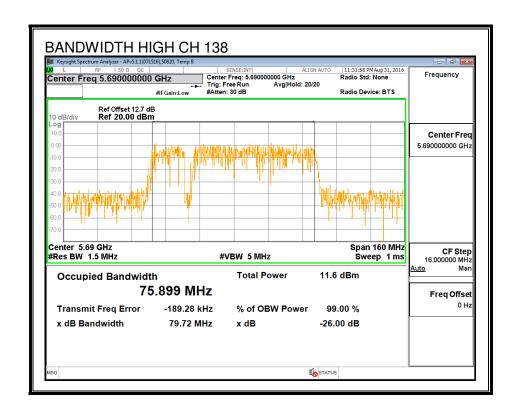
# **RESULTS**

Frequency	99% Bandwidth
(MHz)	(MHz)
5530	76.076
5610	75.628
5690	75.899

#### 99% BANDWIDTH







# 8.93.3. AVERAGE POWER

# **LIMITS**

None; for reporting purposes only.

# **TEST PROCEDURE**

Measurements perform using a wideband gated RF power meter.

# **RESULTS**

	ID:	30554	Date:	9/13/16
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Channel	Frequency	Power
	(MHz)	(dBm)
Low	5530	12.21
Mid	5610	12.23
High	5690	12.12

#### 8.93.4. OUTPUT POWER AND PSD

#### **LIMITS**

FCC §15.407 (a) (2)

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

IC RSS-247 (6.2.3) (1)

The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

# **TEST PROCEDURE**

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

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

#### **DIRECTIONAL ANTENNA GAIN**

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

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# **RESULTS**

ID:	30554	Date:	9/13/16
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# Bandwidth, Antenna Gain, and Limits

Channel	Frequency	Min	Min	Directional	Power	PSD
		26 dB	99%	Gain	Limit	Limit
		BW	BW			
	(MHz)	(MHz)	(MHz)	(dBi)	(dBm)	(dBm)
Low	5530	83.125	76.076	5.20	24.00	11.00
Mid	5610	83.125	75.628	5.20	24.00	11.00

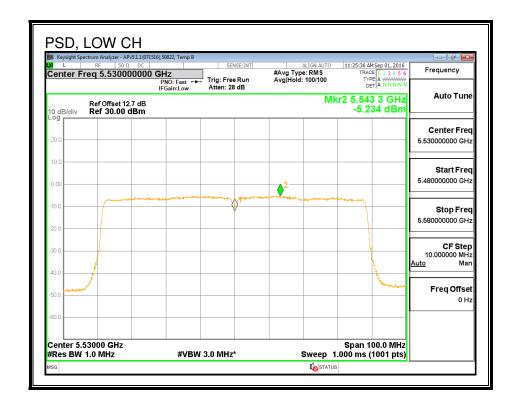
Duty Cycle CF (dB) 0	0.09 Incl	uded in Calculations of Corr'd PSD
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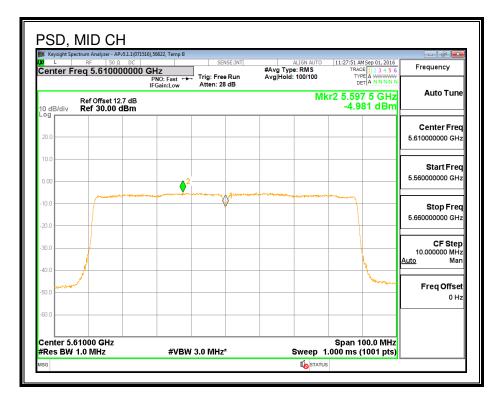
#### **Output Power Results**

Channel	Frequency	Chain 2	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	(MHz) 5530	(dBm) 12.21	(dBm) 12.21	(dBm) 24.00	( <b>dB</b> ) -11.79

Channel	Frequency	Chain 2	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
	(	(==:::)	(==:::)	(42)	(42)
Low	5530	-5.234	-5.14	11.00	-16.14

#### **PSD**





# 8.93.5. STRADDLE CHANNEL 138 RESULTS (FCC)

#### **UNII-2C BAND**

# Bandwidth, Antenna Gain, and Limits

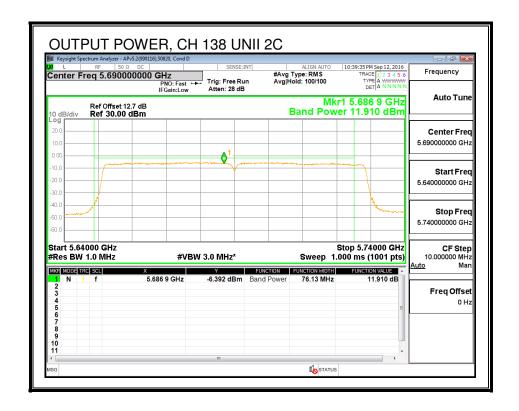
Channel	Frequency	Min	Directional	Directional	Power	PSD
		26 dB	Gain	Gain	Limit	Limit
		BW	for Power	for PSD		
	(MHz)	(MHz)	(dBi)	(dBi)	(dBm)	(dBm)
138	5690	76.13	5.20	5.20	24.00	11.00

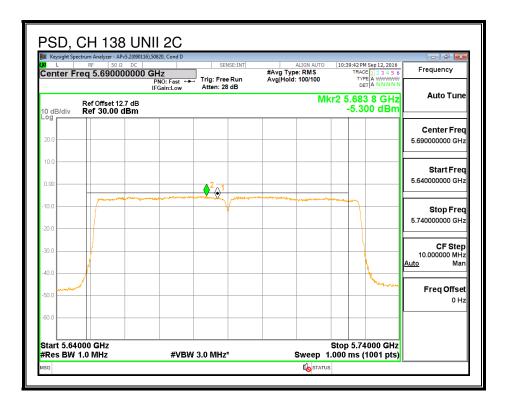
Duty Cycle CF (dB) 0.09	Included in Calculations of Corr'd Power & PSD
-------------------------	--

#### **Output Power Results**

Channel	Frequency	Chain 2	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
138	5690	11.91	12.00	24.00	-12.00

Channel	Frequency	Chain 2	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
138	5690	-5.30	-5.21	11.00	-16.21





# **UNII-3 BAND**

#### **Antenna Gain and Limit**

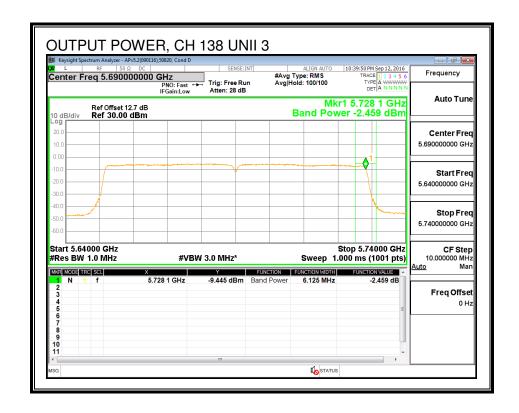
Channel	Frequency	Min	Directional	Power	PSD
		26 dB BW	Gain	Limit	Limit
	(MHz)	(MHz)	(dBi)	(dBm)	(dBm)
138	5690	6.13	5.20	30.00	30.00

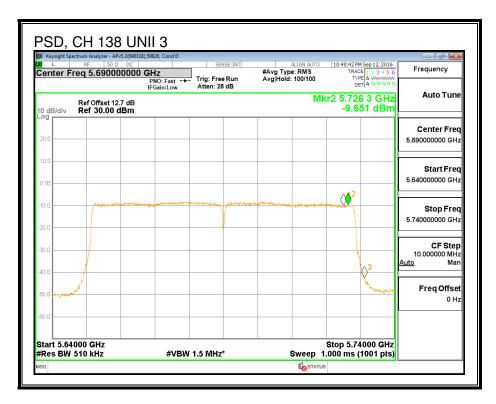
Duty Cycle CF (dB) 0.09	Included in Calculations of Corr'd Power & PSD
-------------------------	--

# **Output Power Results**

Channel	Frequency	Chain 2	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
138	5690	-2.46	-2.37	30.00	-32.37

Channel	Frequency	Chain 2	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
138	5690	-9.65	-9.56	30.00	-39.56





# 8.93.6. STRADDLE CHANNEL 138 RESULTS (IC)

# **UNII-2C BAND**

# Bandwidth, Antenna Gain, and Limits

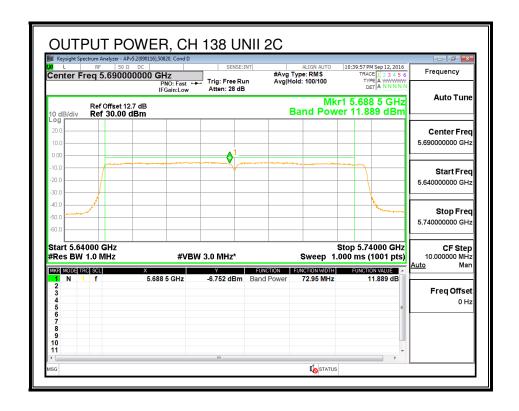
Channel	Frequency	Min	Directional	Directional	Power	PSD
		99%	Gain	Gain	Limit	Limit
		BW	for Power	for PSD		
	(MHz)	(MHz)	(dBi)	(dBi)	(dBm)	(dBm)
138	5690	72.950	5.20	5.20	24.00	11.00

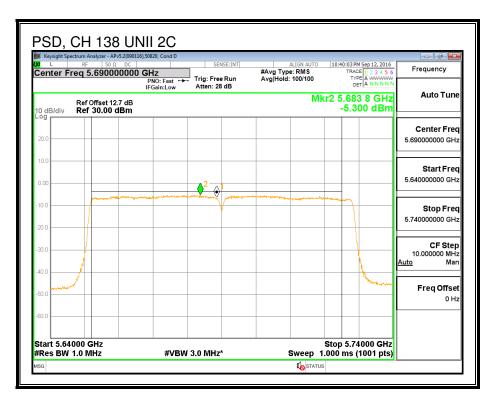
Duty Cycle CF (dB) 0.09	Included in Calculations of Corr'd Power & PSD
-------------------------	--

#### **Output Power Results**

Channel	Frequency	Chain 2	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
138	5690	11.89	11.98	24.00	-12.02

Channel	Frequency	Chain 2	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
138	5690	-5.30	-5.21	11.00	-16.21





# **UNII-3 BAND**

#### **Antenna Gain and Limit**

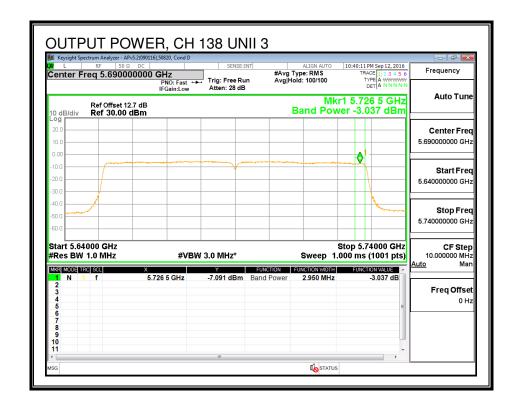
Channel	Frequency	Min	Directional	Power	PSD
		99%	Gain	Limit	Limit
		BW			
	(MHz)	(MHz)	(dBi)	(dBm)	(dBm)
138	5690	2.950	5.20	30.00	30.00

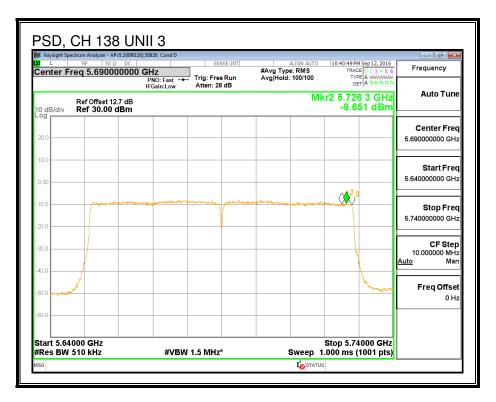
Duty Cycle CF (dB) 0.09	Included in Calculations of Corr'd Power & PSD
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# **Output Power Results**

Channel	Frequency	Chain 2	Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
138	5690	-3.04	-2.95	30.00	-32.95

Channel	Frequency	Chain 2	Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
138	5690	-9.65	-9.56	30.00	-39.56





#### 8.93.7. **6 dB BANDWIDTH**

#### **LIMITS**

FCC §15.407 (e)

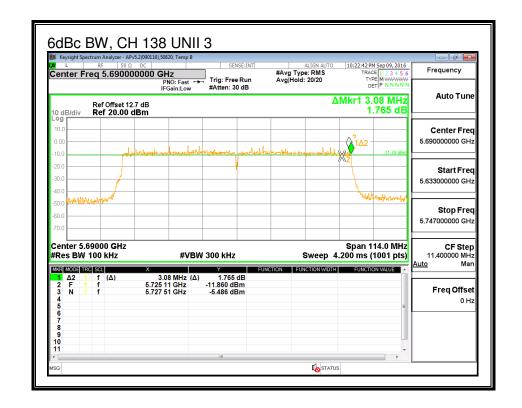
IC RSS-247 (6.2.4) (1)

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

# **RESULTS**

Channel	Frequency	6 dB Bandwidth
	(MHz)	(MHz)
High	5690	3.08

#### **6 dB BANDWIDTH**



# 8.94. 802.11ac VHT80 2Tx (CHAIN 0 + CHAIN 1) CDD MODE IN THE 5.6 GHz BAND (5610MHz for FCC only)

# 8.94.1. **26 dB BANDWIDTH**

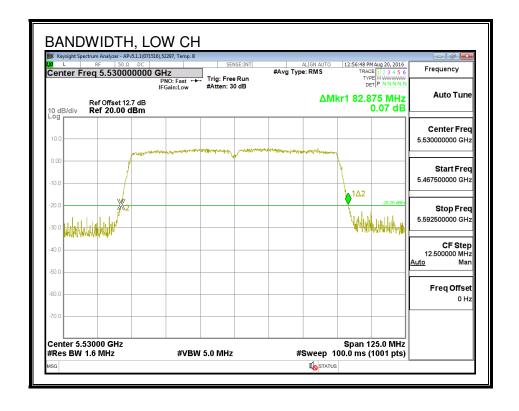
# **LIMITS**

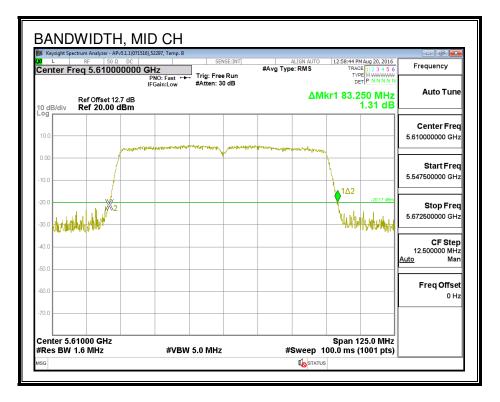
None; for reporting purposes only.

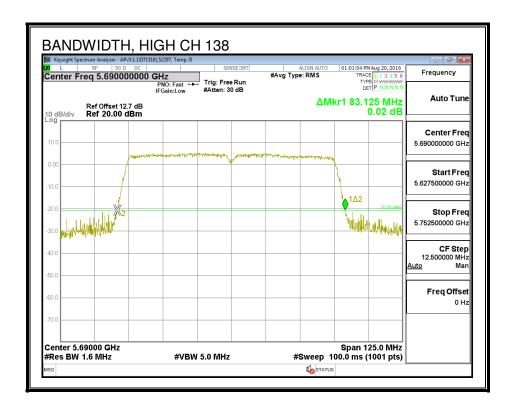
# **RESULTS**

Channel	Frequency	26 dB BW	26 dB BW	
		Chain 0	Chain 1	
	(MHz)	(MHz)	(MHz)	
Low	5530	82.875	82.750	
Mid	5610	83.250	82.875	
High	5690	83.125	82.750	

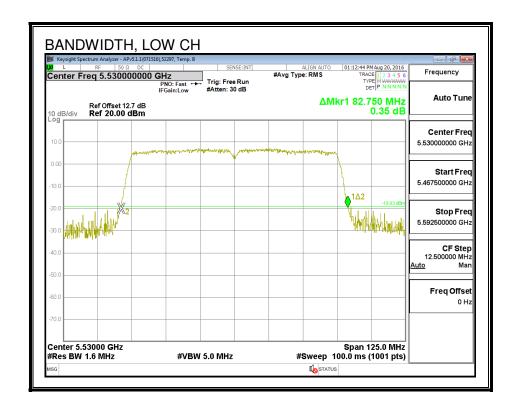
#### 26 dB BANDWIDTH, CHAIN 0

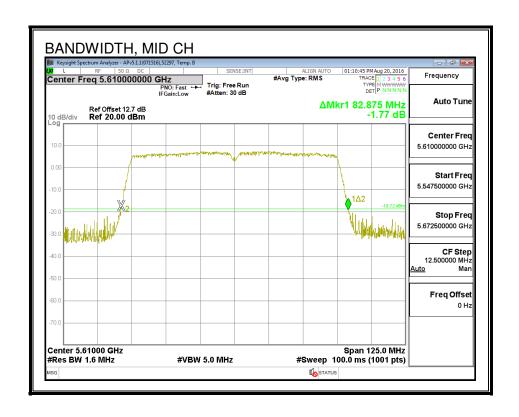


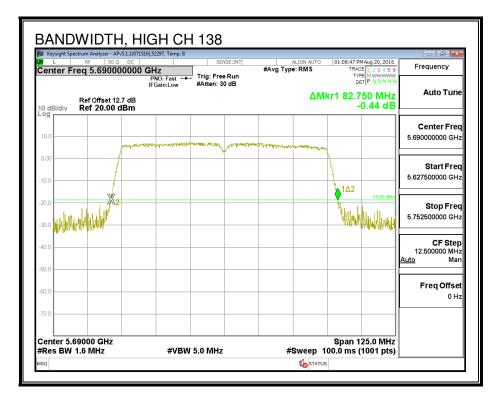




#### 26 dB BANDWIDTH, CHAIN 1







# 8.94.2. **99% BANDWIDTH**

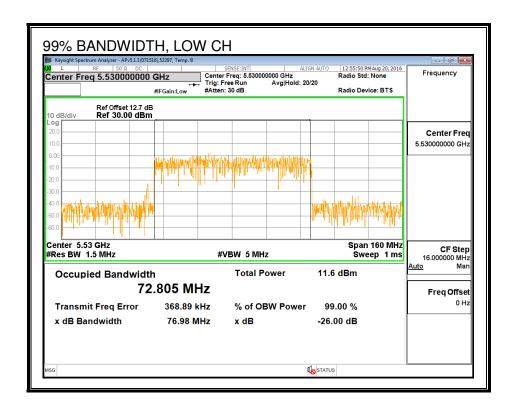
# **LIMITS**

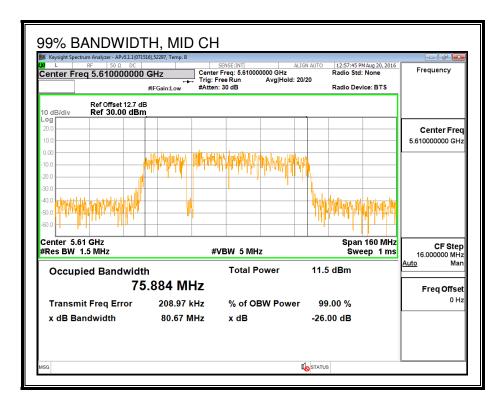
None; for reporting purposes only.

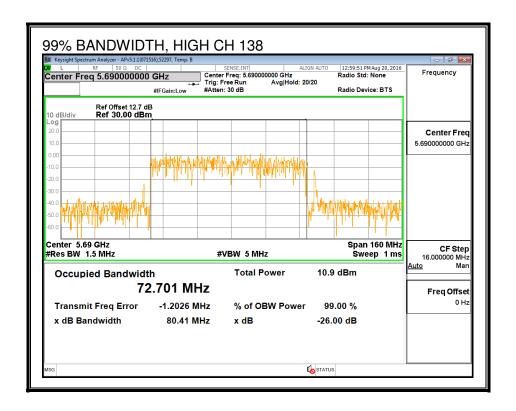
# **RESULTS**

Channel	Frequency	99% BW	99% BW	
		Chain 0	Chain 1	
	(MHz)	(MHz)	(MHz)	
Low	5530	72.805	75.946	
Mid	5610	75.884	76.070	
High	5690	72.701	75.773	

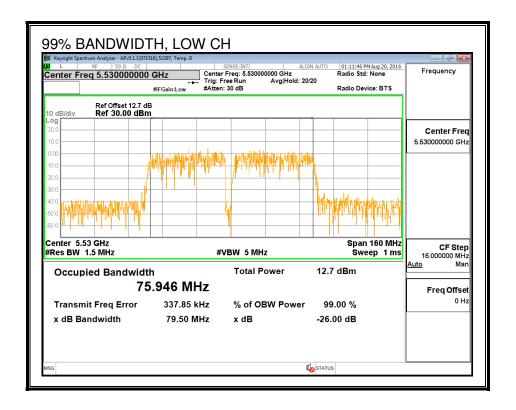
#### 99% BANDWIDTH, CHAIN 0



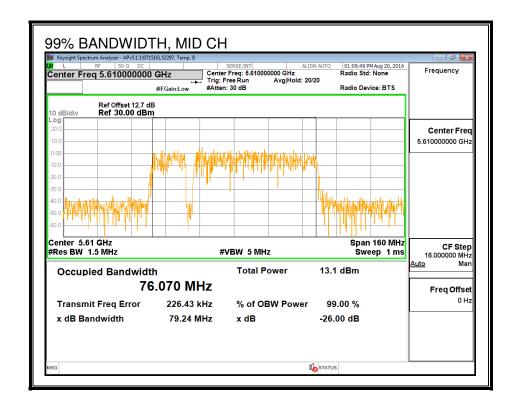


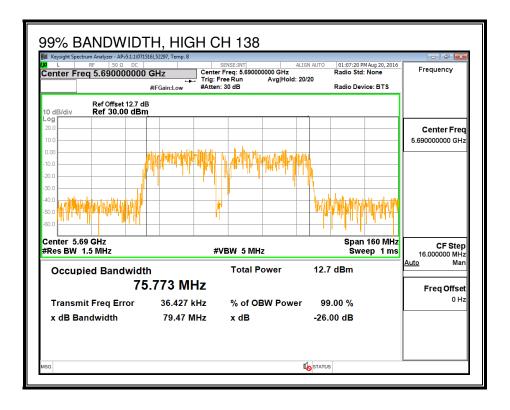


#### 99% BANDWIDTH, CHAIN 1



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# 8.94.3. **AVERAGE POWER**

# **LIMITS**

None; for reporting purposes only.

# **TEST PROCEDURE**

Measurements perform using a wideband gated RF power meter.

# **RESULTS**

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Channel	Frequency	Chain 0 Chain		Total
		Power Power		Power
	(MHz)	(dBm)	(dBm)	(dBm)
Low	5530	9.99	9.58	12.80
Mid	5610	12.06	12.17	15.13
High	5690	12.11	12.19	15.16

#### 8.94.4. OUTPUT POWER AND PSD

#### **LIMITS**

FCC §15.407 (a) (2)

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

IC RSS-247 (6.2.3) (1)

The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

#### **TEST PROCEDURE**

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

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

# **DIRECTIONAL ANTENNA GAIN**

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

Chain 0	Chain 1	<b>Uncorrelated Chains</b>
Antenna	Antenna	Directional
Gain	Gain	Gain
(dBi)	(dBi)	(dBi)
4.90	7.40	6.33

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

Chain 0	Chain 1	<b>Correlated Chains</b>
Antenna	Antenna	Directional
Gain	Gain	Gain
(dBi)	(dBi)	(dBi)
4.90	7.40	9.25

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# **RESULTS**

ID:	43573	Date:	9/7/16
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# Bandwidth, Antenna Gain and Limits

Channel	Frequency	Min	Min	Directional	Directional	Power	PSD
		26 dB	99%	Gain	Gain	Limit	Limit
		BW	BW	for Power	for PSD		
	(MHz)	/N/ILI_\	(MHz)	(ADi)	(dBi)	(dBm)	(dBm)
	(IVITIZ)	(MHz)	(IVITIZ)	(dBi)	(ubi)	(ubili)	(ubili)
Low	5530	82.75	72.805	6.33	9.25	24.00	7.75

Duty Cycle CF (dB)	0.18	Included in Calculations of Corr'd PSD
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#### **Output Power Results**

Channel	Frequency	Chain 0	Chain 1	Total	Power	Power
		Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5530	9.99	9.58	12.80	24.00	-11.20
High	5610	12.06	12.17	15.13	24.00	-8.87

Channel	Frequency	Chain 0	Chain 1	Total	PSD	PSD
		Meas	Meas	Corr'd	Limit	Margin
		PSD	PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5530	-7.23	-7.58	-4.21	7.75	-11.96
High	5610	-5.28	-5.16	-2.02	7.75	-9.77

#### PSD, CHAIN 0

