## 8.25.3. 99% BANDWIDTH

## <u>LIMITS</u>

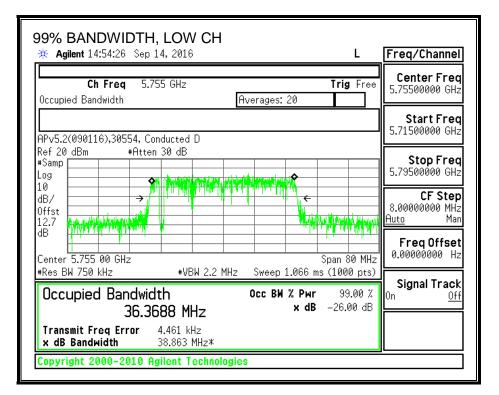
None; for reporting purposes only.

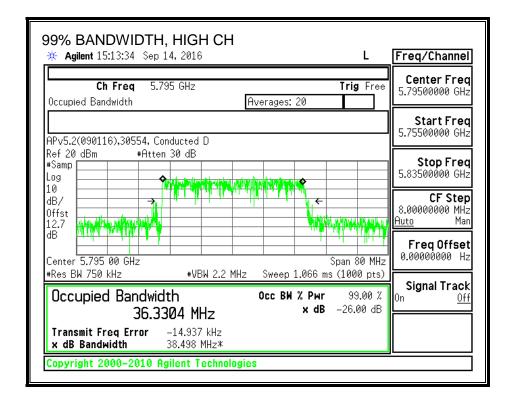
## **RESULTS**

Channel	Frequency	99% BW	99% BW
		Chain 0	Chain 1
	(MHz)	(MHz)	(MHz)
Low	5755	36.369	36.358
High	5795	36.330	36.366

Page 601 of 1002

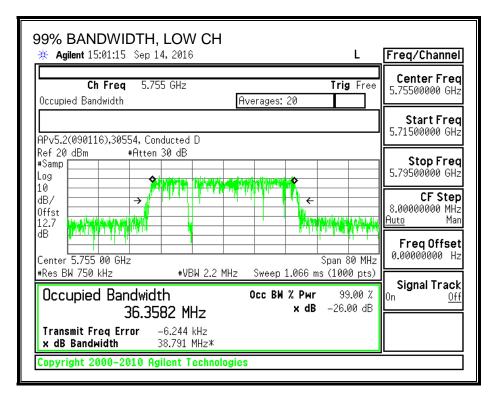
## 99% BANDWIDTH, CHAIN 0

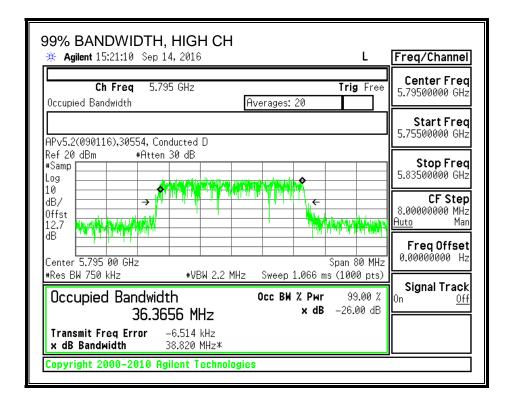




Page 602 of 1002

## 99% BANDWIDTH, CHAIN 1





Page 603 of 1002

# 8.25.4. AVERAGE POWER (FCC)

## **LIMITS**

None; for reporting purposes only.

## TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

## **RESULTS**

		-	
ID:	44366	Date:	9/12/16

Channel	Frequency	Chain 0	Chain 1	Total
		Power	Power	Power
	(MHz)	(dBm)	(dBm)	(dBm)
Low	5755	12.74	12.75	15.76
High	5795	12.70	12.75	15.74

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Page 604 of 1002

# 8.25.5. OUTPUT POWER (FCC)

## <u>LIMITS</u>

FCC §15.407 (a) (3)

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

## TEST PROCEDURE

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

## **DIRECTIONAL ANTENNA GAIN**

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)
4.00	6.30	8.24

Page 605 of 1002

## **RESULTS**

**ID:** 44366 **Date:** 9/12/16

Antenna Gain and Limit

Channel	Frequency	Directional	Power
		Gain	Limit
	(MHz)	(dBi)	(dBm)
Low	5755	8.24	27.76
High	5795	8.24	27.76

## **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	5755	12.74	12.75	15.76	27.76	-12.00
High	5795	12.70	12.75	15.74	27.76	-12.02

# 8.25.6. PSD (FCC)

## <u>LIMITS</u>

FCC §15.407 (a) (3)

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

## **DIRECTIONAL ANTENNA GAIN**

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)
4.00	6.30	8.24

Page 607 of 1002

## RESULTS

#### Antenna Gain and Limit

Channel	Frequency	Directional	PSD
		Gain	Limit
	(MHz)	(dBi)	(dBm)
Low	5755	8.24	27.76
High	5795	8.24	27.76

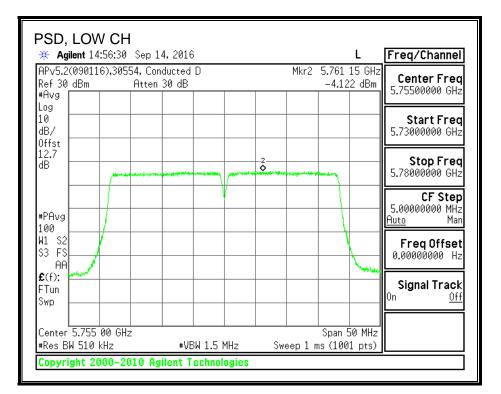
## Duty Cycle CF (dB) 0.79 Included in Calculations of Corr'd PSD

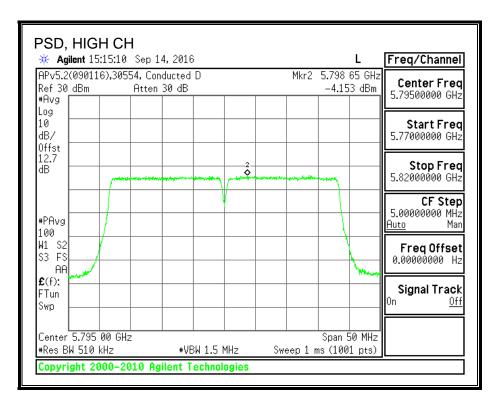
#### **PSD** Results

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	5755	-4.12	-4.04	-0.28	27.76	-28.04
High	5795	-4.15	-4.09	-0.32	27.76	-28.08

Page 608 of 1002

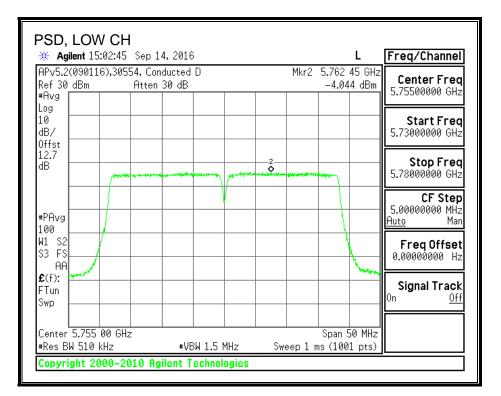
## PSD, CHAIN 0

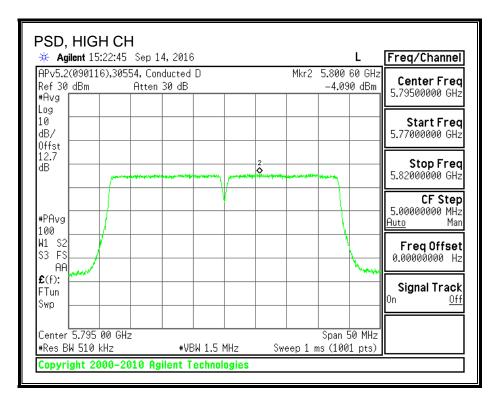




Page 609 of 1002

## PSD, CHAIN 1





Page 610 of 1002

# 8.25.1. AVERAGE POWER (IC)

## LIMITS

None; for reporting purposes only.

## TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

## **RESULTS**

	_		
ID:	44366	Date:	9/12/16

Channel	Frequency	Chain 0	Chain 1	Total
		Power	Power	Power
	(MHz)	(dBm)	(dBm)	(dBm)
Low	5755	11.42	11.47	14.46
High	5795	12.70	12.75	15.74

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Page 611 of 1002

# 8.25.2. OUTPUT POWER (IC)

## <u>LIMITS</u>

IC RSS-247 (6.2.4) (1)

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

## TEST PROCEDURE

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

## **DIRECTIONAL ANTENNA GAIN**

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)
4.00	6.30	8.24

Page 612 of 1002

## **RESULTS**

**ID:** 44366 **Date:** 9/12/16

Antenna Gain and Limit

Channel	Frequency	Directional	Power
		Gain	Limit
	(MHz)	(dBi)	(dBm)
Low	5755	8.24	27.76
High	5795	8.24	27.76

## **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	5755	11.42	11.47	14.46	27.76	-13.30
High	5795	12.70	12.75	15.74	27.76	-12.02

8.25.3. PSD (IC)

## <u>LIMITS</u>

IC RSS-247 (6.2.4) (1)

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

## **DIRECTIONAL ANTENNA GAIN**

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

Chain 0	Chain 1	<b>Correlated Chains</b>
Antenna	Antenna	Directional
Gain	Gain	Gain
(dBi)	(dBi)	(dBi)
4.00	6.30	8.24

Page 614 of 1002

## RESULTS

#### Antenna Gain and Limit

Channel	Frequency	Directional	PSD
		Gain	Limit
	(MHz)	(dBi)	(dBm)
Low	5755	8.24	27.76
High	5795	8.24	27.76

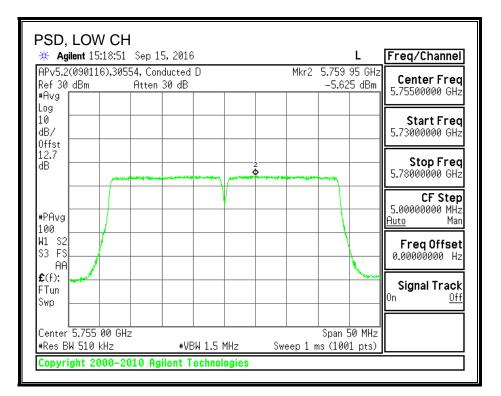
## Duty Cycle CF (dB) 0.79 Included in Calculations of Corr'd PSD

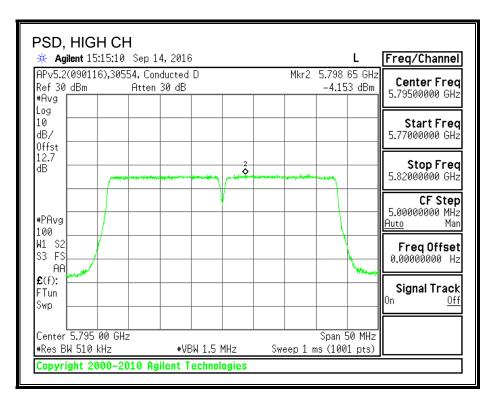
#### **PSD** Results

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	5755	-5.63	-5.15	-1.58	27.76	-29.34
High	5795	-4.15	-4.09	-0.32	27.76	-28.08

Page 615 of 1002

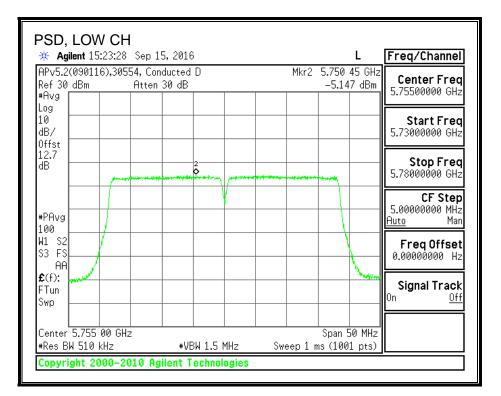
## PSD, CHAIN 0

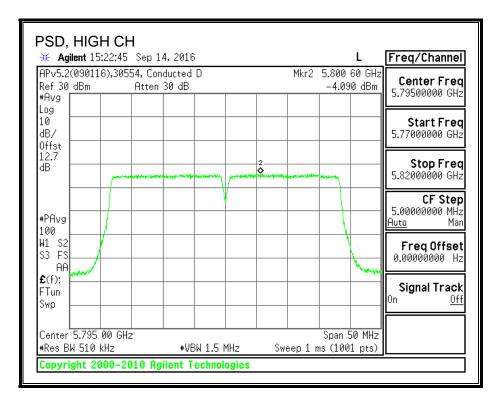




Page 616 of 1002

## PSD, CHAIN 1





Page 617 of 1002

# 8.26. 802.11ac VHT40 2Tx (CHAIN 0 + CHAIN 2) BEAM FORMING MODE IN THE 5.8 GHz BAND

## 8.26.1. 6 dB BANDWIDTH

## <u>LIMITS</u>

FCC §15.407 (e)

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

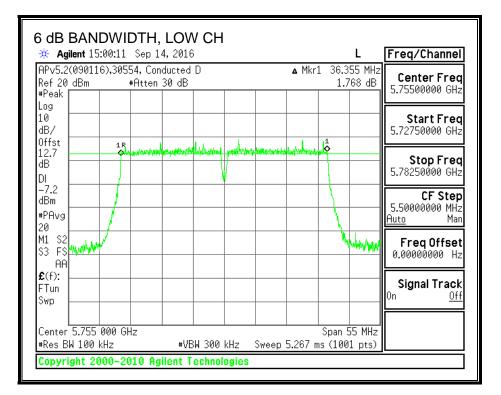
## **RESULTS**

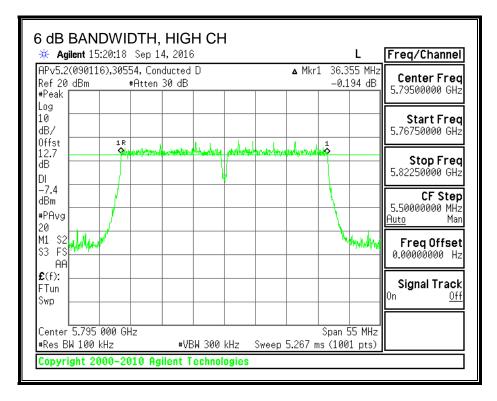
Channel	Frequency	6 dB BW	6 dB BW	Minimum
		Chain 0	Chain 2	Limit
	(MHz)	(MHz)	(MHz)	(MHz)
Low	5755	36.355	36.355	0.5
High	5795	36.355	36.355	0.5

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Page 618 of 1002

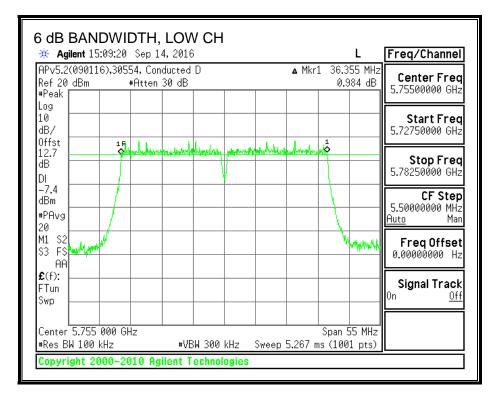
## 6 dB BANDWIDTH, CHAIN 0

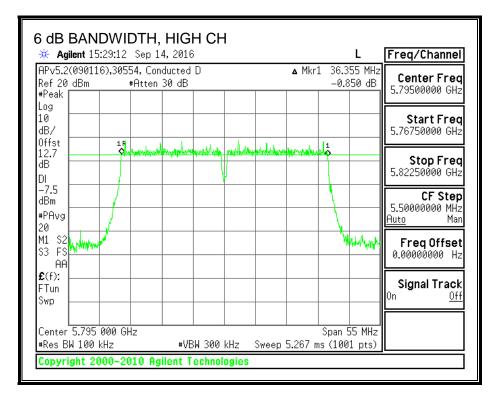




Page 619 of 1002

## 6 dB BANDWIDTH, CHAIN 2





Page 620 of 1002

# 8.26.2. **26 dB BANDWIDTH**

## <u>LIMITS</u>

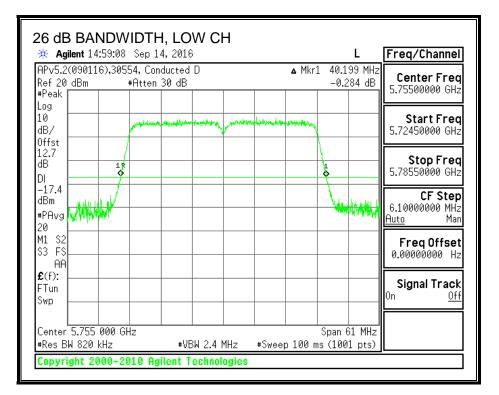
None, for reporting purposes only.

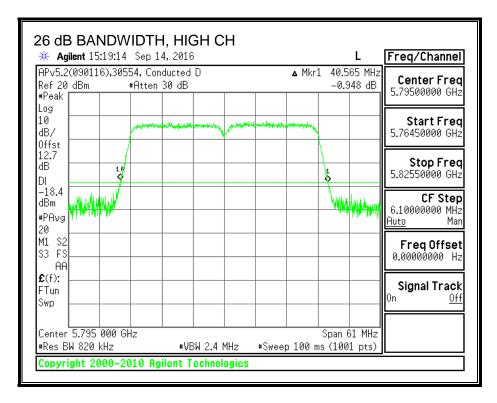
## **RESULTS**

Channel	Frequency	26 dB BW	26 dB BW
		Chain 0	Chain 2
	(MHz)	(MHz)	(MHz)
Low	5755	40.199	40.443
High	5795	40.565	40.321

Page 621 of 1002

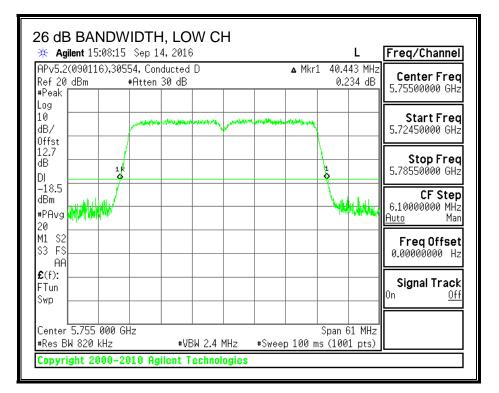
## 26 dB BANDWIDTH, CHAIN 0

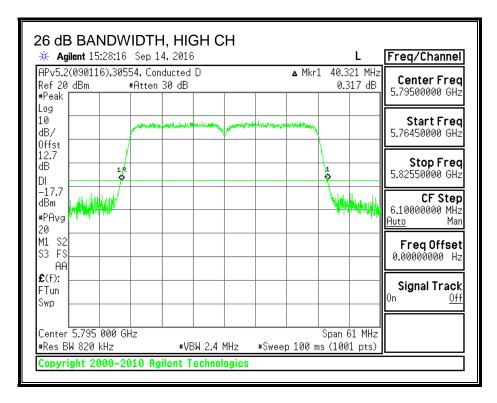




Page 622 of 1002

## 26 dB BANDWIDTH, CHAIN 2





Page 623 of 1002

## 8.26.3. 99% BANDWIDTH

## <u>LIMITS</u>

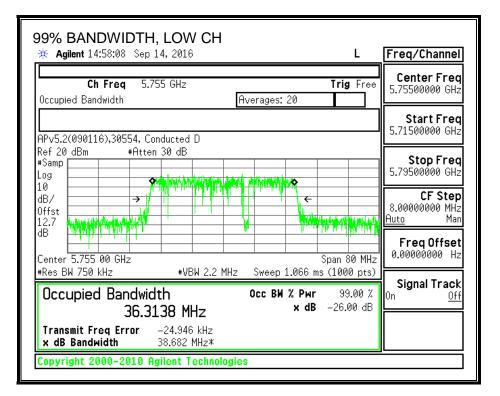
None; for reporting purposes only.

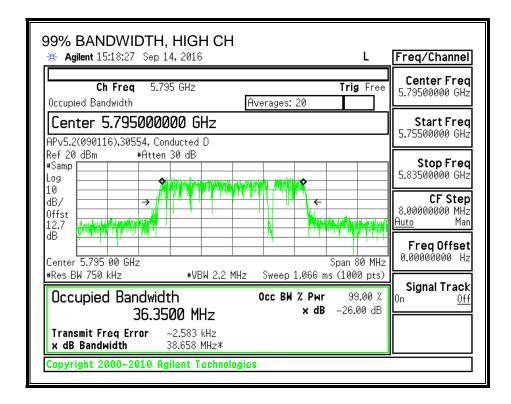
## **RESULTS**

Channel	Frequency	99% BW	99% BW
		Chain 0	Chain 2
	(MHz)	(MHz)	(MHz)
Low	5755	36.314	36.314
High	5795	36.350	36.359

Page 624 of 1002

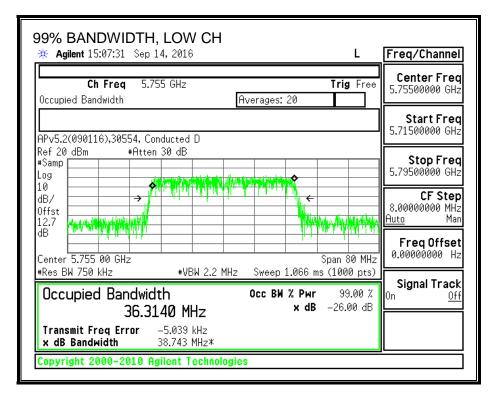
## 99% BANDWIDTH, CHAIN 0

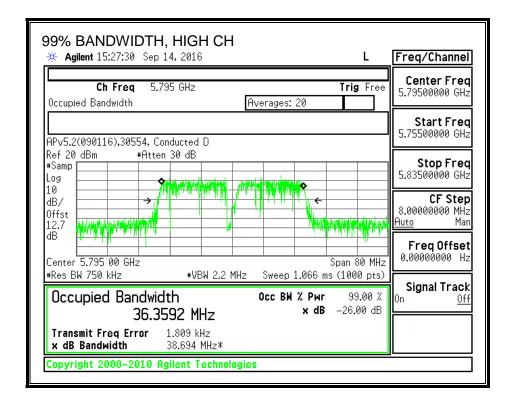




Page 625 of 1002

## 99% BANDWIDTH, CHAIN 2





Page 626 of 1002

# 8.26.4. AVERAGE POWER (FCC)

## **LIMITS**

None; for reporting purposes only.

## TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

## **RESULTS**

<b>ID:</b> 44366	Date:	9/12/16
------------------	-------	---------

Channel	Frequency	Chain 0	Chain 2	Total
		Power	Power	Power
	(MHz)	(dBm)	(dBm)	(dBm)
Low	5755	12.71	12.69	15.71
High	5795	12.71	12.75	15.74

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Page 627 of 1002

# 8.26.5. OUTPUT POWER (FCC)

## <u>LIMITS</u>

FCC §15.407 (a) (3)

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

## TEST PROCEDURE

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

## **DIRECTIONAL ANTENNA GAIN**

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

Chain 0	Chain 2	<b>Correlated Chains</b>
Antenna	Antenna	Directional
Gain	Gain	Gain
(dBi)	(dBi)	(dBi)
4.00	4.70	7.37

Page 628 of 1002

## **RESULTS**

ID:	44366	Date:	9/12/16	
-----	-------	-------	---------	--

## Antenna Gain and Limit

Channel	Frequency	Directional	Power
		Gain	Limit
	(MHz)	(dBi)	(dBm)
Low	5755	7.37	28.63
High	5795	7.37	28.63

#### **Output Power Results**

Channel	Frequency	Chain 0	Chain 2	Total	Power	Power
		Meas Power	Meas Power	Corr'd Power	Limit	Margin
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5755	12.71	12.69	15.71	28.63	-12.92
High	5795	12.71	12.75	15.74	28.63	-12.89

Page 629 of 1002

# 8.26.6. PSD (FCC)

## <u>LIMITS</u>

FCC §15.407 (a) (3)

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

## **DIRECTIONAL ANTENNA GAIN**

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

Chain 0	Chain 2	<b>Correlated Chains</b>	
Antenna	Antenna	Directional	
Gain	Gain	Gain	
(dBi)	(dBi)	(dBi)	
4.00	4.70	7.37	

Page 630 of 1002

## RESULTS

#### Antenna Gain and Limit

Channel	Frequency	Directional	PSD
		Gain	Limit
	(MHz)	(dBi)	(dBm)
Low	5755	7.37	28.63
High	5795	7.37	28.63

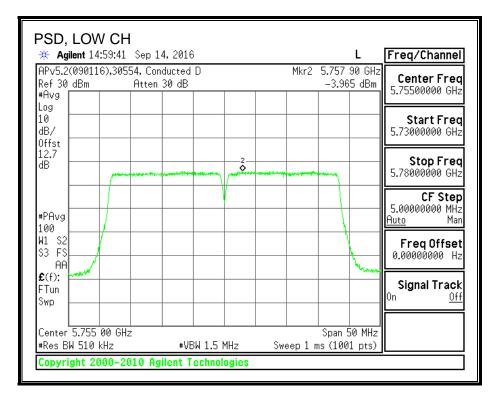
Duty Cycle CF (dB)	0.79	Included in Calculations of Corr'd PSD

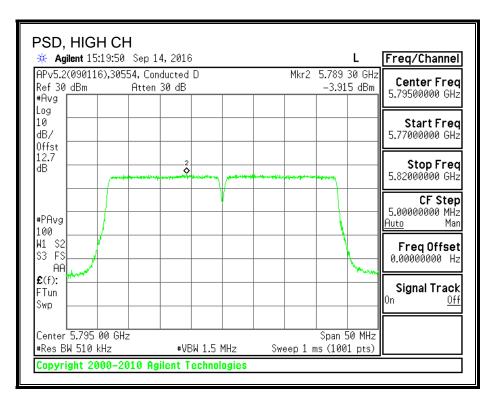
#### **PSD** Results

Channel	Frequency	Chain 0	Chain 2	Total	PSD	PSD
		Meas	Meas	Corr'd	Limit	Margin
		PSD	PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5755	-3.965	-4.128	-0.25	28.63	-28.88
High	5795	-3.915	-4.043	-0.18	28.63	-28.81

Page 631 of 1002

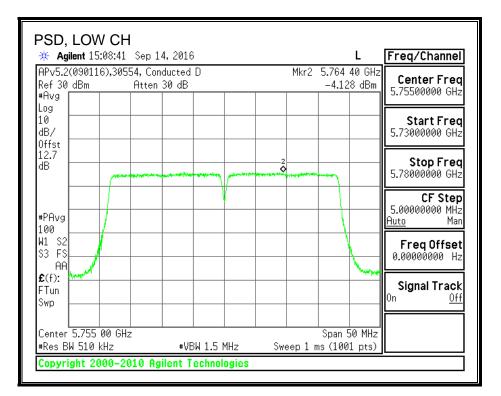
## PSD, CHAIN 0

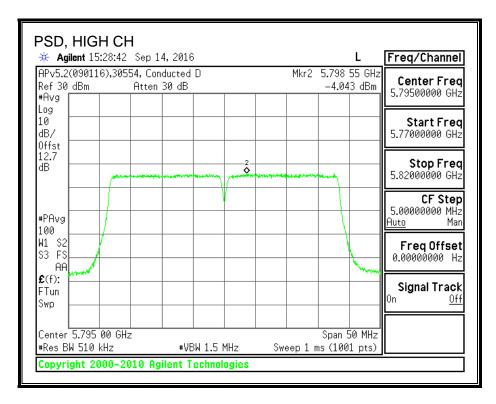




Page 632 of 1002

## PSD, CHAIN 2





Page 633 of 1002

# 8.26.1. AVERAGE POWER (IC)

## LIMITS

None; for reporting purposes only.

## TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

## **RESULTS**

<b>ID:</b> 44366	Date:	9/12/16
------------------	-------	---------

Channel	Frequency	Chain 0	Chain 2	Total
		Power	Power	Power
	(MHz)	(dBm)	(dBm)	(dBm)
Low	5755	11.43	11.45	14.45
High	5795	12.71	12.75	15.74

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Page 634 of 1002

# 8.26.2. OUTPUT POWER (IC)

## <u>LIMITS</u>

IC RSS-247 (6.2.4) (1)

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

## TEST PROCEDURE

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

## **DIRECTIONAL ANTENNA GAIN**

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

Chain 0	Chain 2	<b>Correlated Chains</b>		
Antenna	Antenna	Directional		
Gain	Gain	Gain		
(dBi)	(dBi)	(dBi)		
4.00	4.70	7.37		

Page 635 of 1002

## **RESULTS**

ID:	44366	Date:	9/12/16	
-----	-------	-------	---------	--

## Antenna Gain and Limit

Channel	Frequency	Directional	Power
		Gain	Limit
	(MHz)	(dBi)	(dBm)
Low	5755	7.37	28.63
High	5795	7.37	28.63

#### **Output Power Results**

Channel	Frequency	Chain 0	Chain 2	Total	Power	Power
		Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5755	11.43	11.45	14.45	28.63	-14.18
High	5795	12.71	12.75	15.74	28.63	-12.89

Page 636 of 1002

8.26.3. PSD (IC)

# <u>LIMITS</u>

IC RSS-247 (6.2.4) (1)

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

# **DIRECTIONAL ANTENNA GAIN**

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

Chain 0	Chain 2	Correlated Chains	
Antenna	Antenna	Directional	
Gain	Gain	Gain	
(dBi)	(dBi)	(dBi)	
4.00	4.70	7.37	

Page 637 of 1002

# RESULTS

#### Antenna Gain and Limit

Channel	Frequency	Directional	PSD
		Gain	Limit
	(MHz)	(dBi)	(dBm)
Low	5755	7.37	28.63
High	5795	7.37	28.63

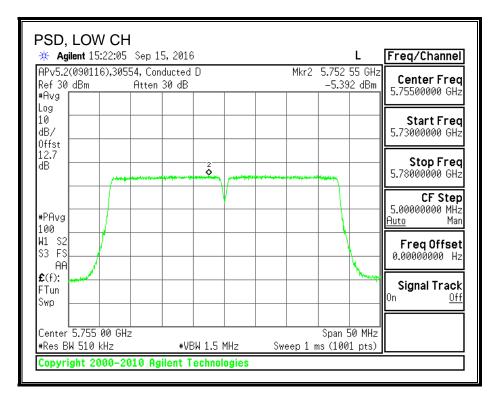
Duty Cycle CF (dB)	0.79	Included in Calculations of Corr'd PSD

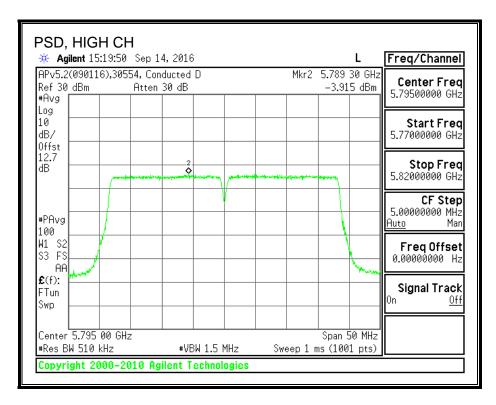
#### **PSD** Results

Channel	Frequency	Chain 0	Chain 2	Total	PSD	PSD
		Meas	Meas	Corr'd	Limit	Margin
		PSD	PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5755	-5.392	-5.371	-1.58	28.63	-30.21
High	5795	-3.915	-4.043	-0.18	28.63	-28.81

Page 638 of 1002

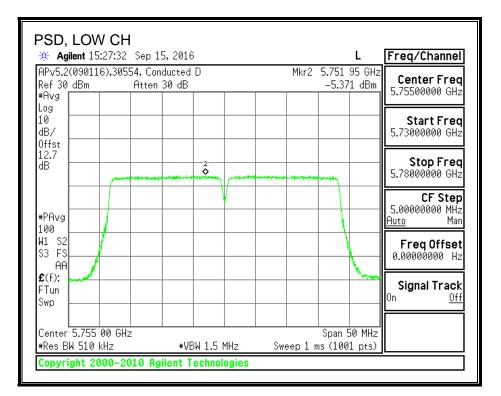
## PSD, CHAIN 0

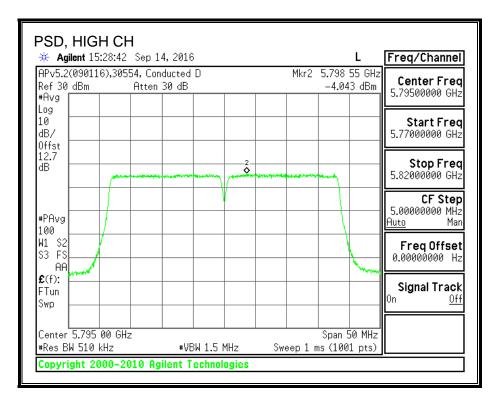




Page 639 of 1002

## PSD, CHAIN 2





Page 640 of 1002

# 8.27. 802.11ac VHT40 2Tx (CHAIN 1 + CHAIN 2) BEAM FORMING MODE IN THE 5.8 GHz BAND

# 8.27.1. 6 dB BANDWIDTH

## <u>LIMITS</u>

FCC §15.407 (e)

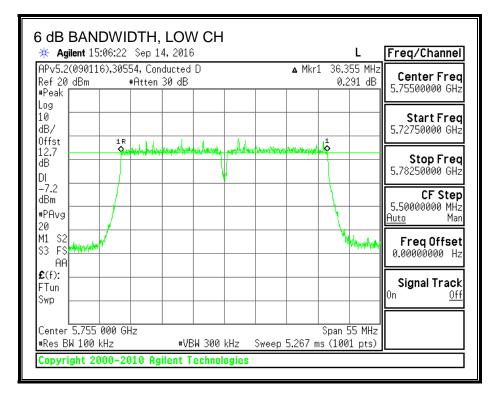
The minimum 6 dB bandwidth shall be at least 500 kHz.

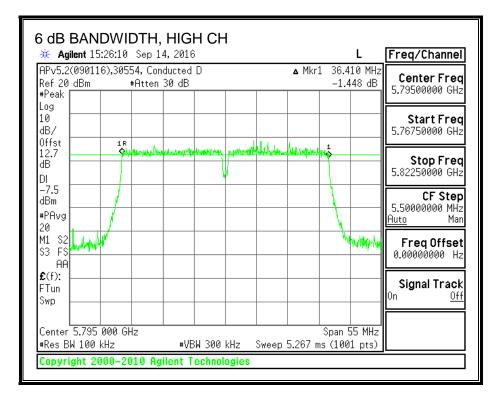
#### RESULTS

Channel	Frequency	6 dB BW	6 dB BW	Minimum
		Chain 1	Chain 2	Limit
	(MHz)	(MHz)	(MHz)	(MHz)
Low	5755	36.355	36.300	0.5
High	5795	36.410	36.410	0.5

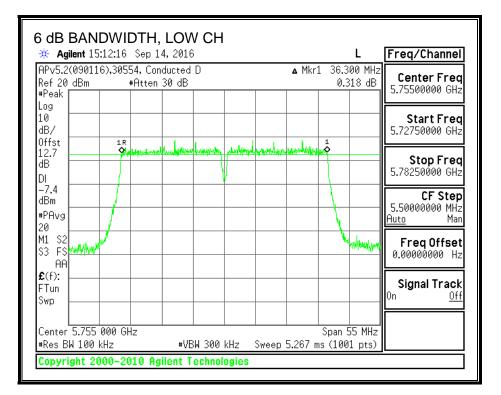
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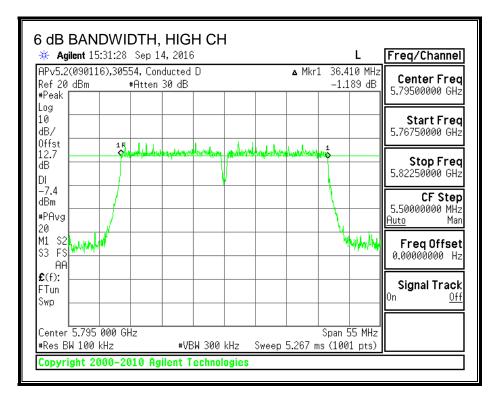
Page 641 of 1002





Page 642 of 1002





Page 643 of 1002

# 8.27.2. **26 dB BANDWIDTH**

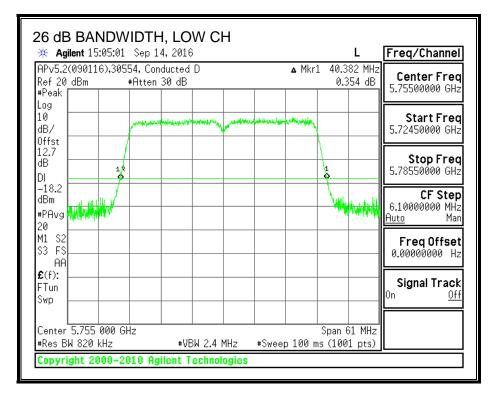
#### LIMITS

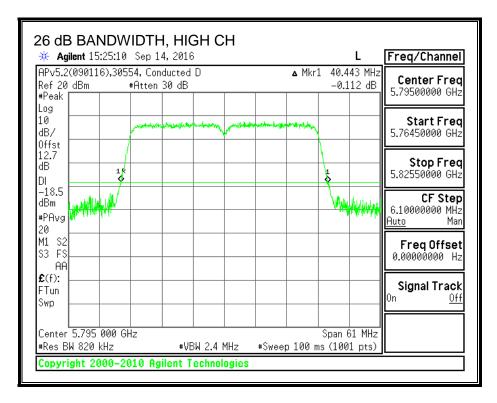
None, for reporting purposes only.

## **RESULTS**

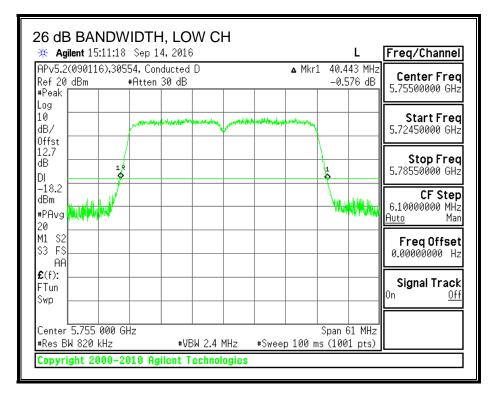
Channel	Frequency	26 dB BW	26 dB BW
		Chain 1	Chain 2
	(MHz)	(MHz)	(MHz)
Low	5755	40.382	40.443
High	5795	40.443	40.321

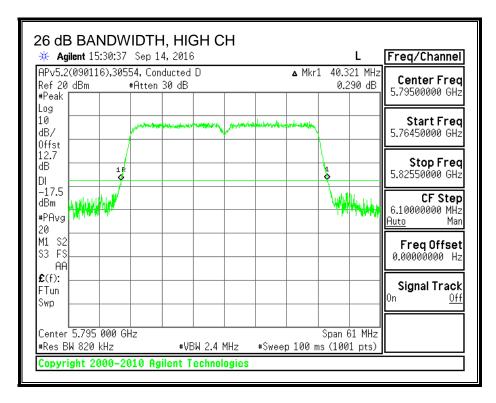
Page 644 of 1002





Page 645 of 1002





Page 646 of 1002

# 8.27.3. 99% BANDWIDTH

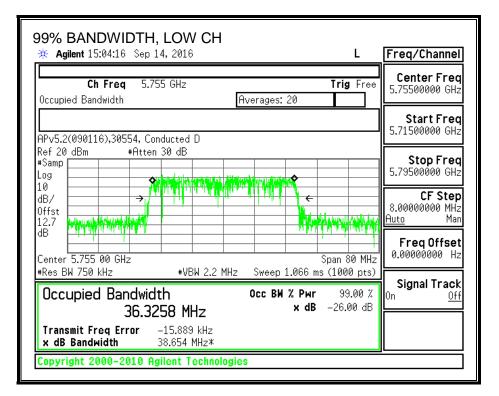
#### <u>LIMITS</u>

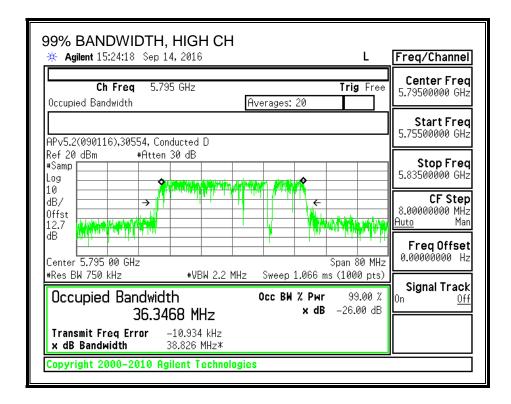
None; for reporting purposes only.

# **RESULTS**

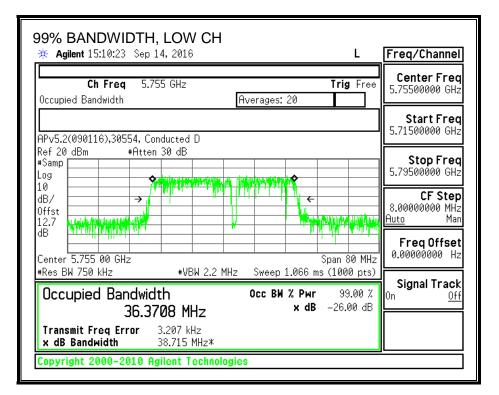
Channel	Frequency	99% BW	99% BW
		Chain 1	Chain 2
	(MHz)	(MHz)	(MHz)
Low	5755	36.326	36.371
High	5795	36.347	36.358

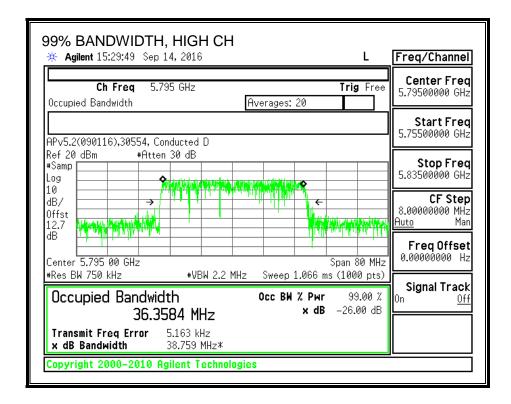
Page 647 of 1002





Page 648 of 1002





Page 649 of 1002

# 8.27.4. AVERAGE POWER (FCC)

#### <u>LIMITS</u>

None; for reporting purposes only.

#### TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

#### **RESULTS**

<b>ID:</b> 44366	Date:	9/12/16
------------------	-------	---------

Channel	Frequency	Chain 1	Chain 2	Total
		Power	Power	Power
	(MHz)	(dBm)	(dBm)	(dBm)
Low	5755	12.71	12.75	15.74
High	5795	12.75	12.65	15.71

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Page 650 of 1002

# 8.27.5. OUTPUT POWER (FCC)

# <u>LIMITS</u>

FCC §15.407 (a) (3)

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

## TEST PROCEDURE

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

#### **DIRECTIONAL ANTENNA GAIN**

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

Chain 1	Chain 2	<b>Correlated Chains</b>
Antenna	Antenna	Directional
Gain	Gain	Gain
(dBi)	(dBi)	(dBi)
6.30	4.70	8.55

Page 651 of 1002

## **RESULTS**

ID:	44366	Date:	9/12/16	
-----	-------	-------	---------	--

# Antenna Gain and Limit

Channel	Frequency	Directional	Power
		Gain	Limit
	(MHz)	(dBi)	(dBm)
Low	5755	8.55	27.45
High	5795	8.55	27.45

#### **Output Power Results**

Channel	Frequency	Chain 1	Chain 2	Total	Power	Power
		Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5755	12.71	12.75	15.74	27.45	-11.71
High	5795	12.75	12.65	15.71	27.45	-11.74

Page 652 of 1002

# 8.27.6. PSD (FCC)

# <u>LIMITS</u>

FCC §15.407 (a) (3)

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

## **DIRECTIONAL ANTENNA GAIN**

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

Chain 1	Chain 2	<b>Correlated Chains</b>
Antenna	Antenna	Directional
Gain	Gain	Gain
(dBi)	(dBi)	(dBi)
6.30	4.70	8.55

Page 653 of 1002

# RESULTS

#### Antenna Gain and Limit

Channel	Frequency	Directional	PSD
		Gain	Limit
	(MHz)	(dBi)	(dBm)
Low	5755	8.55	27.45
High	5795	8.55	27.45

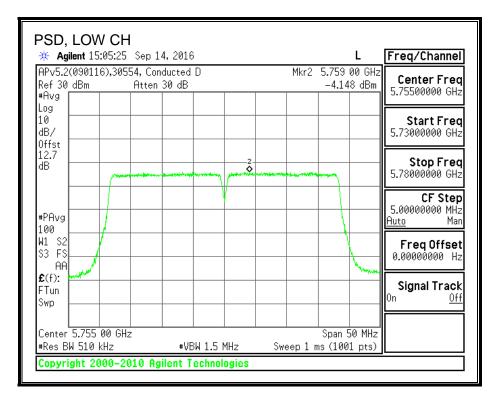
Duty Cycle CF (dB)	0.79	Included in Calculations of Corr'd PSD

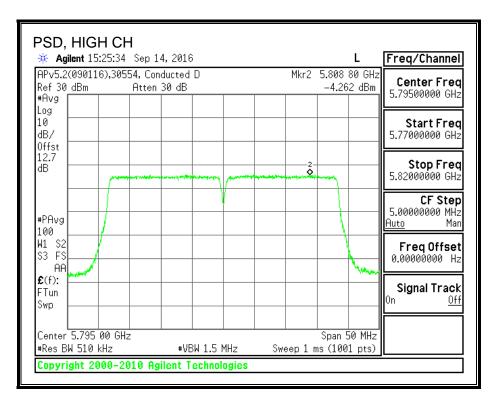
#### **PSD** Results

Channel	Frequency	Chain 1	Chain 2	Total	PSD	PSD
		Meas	Meas	Corr'd	Limit	Margin
		PSD	PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5755	-4.148	-3.962	-0.25	27.45	-27.70
High	5795	-4.264	-4.14	-0.40	27.45	-27.85

Page 654 of 1002

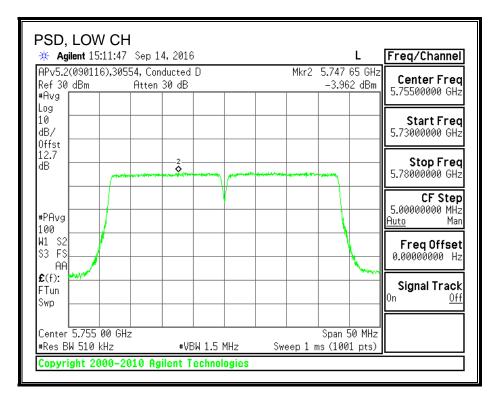
#### PSD, CHAIN 1

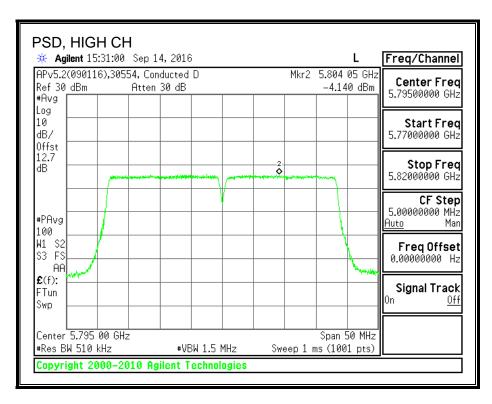




Page 655 of 1002

## PSD, CHAIN 2





Page 656 of 1002

# 8.27.1. AVERAGE POWER (IC)

## LIMITS

None; for reporting purposes only.

## TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

#### **RESULTS**

<b>ID:</b> 44366	Date:	9/12/16
------------------	-------	---------

Channel	Frequency	Chain 1	Chain 2	Total
		Power	Power	Power
	(MHz)	(dBm)	(dBm)	(dBm)
Low	5755	11.38	11.40	14.40
High	5795	12.75	12.65	15.71

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Page 657 of 1002

# 8.27.2. OUTPUT POWER (IC)

# <u>LIMITS</u>

IC RSS-247 (6.2.4) (1)

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

## TEST PROCEDURE

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

#### **DIRECTIONAL ANTENNA GAIN**

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

Chain 1	Chain 2	<b>Correlated Chains</b>
Antenna	Antenna	Directional
Gain	Gain	Gain
(dBi)	(dBi)	(dBi)
6.30	4.70	8.55

Page 658 of 1002

## **RESULTS**

ID:	44366	Date:	9/12/16	
-----	-------	-------	---------	--

# Antenna Gain and Limit

Channel	Frequency	Directional	Power
		Gain	Limit
	(MHz)	(dBi)	(dBm)
Low	5755	8.55	27.45
High	5795	8.55	27.45

#### **Output Power Results**

Channel	Frequency	Chain 1	Chain 2	Total	Power	Power
		Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5755	11.38	11.40	14.40	27.45	-13.05
High	5795	12.75	12.65	15.71	27.45	-11.74

Page 659 of 1002

8.27.3. PSD (IC)

# <u>LIMITS</u>

IC RSS-247 (6.2.4) (1)

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

# **DIRECTIONAL ANTENNA GAIN**

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

Chain 1	Chain 2	<b>Correlated Chains</b>
Antenna	Antenna	Directional
Gain	Gain	Gain
(dBi)	(dBi)	(dBi)
6.30	4.70	8.55

Page 660 of 1002

# RESULTS

#### Antenna Gain and Limit

Channel	Frequency	Directional	PSD
		Gain	Limit
	(MHz)	(dBi)	(dBm)
Low	5755	8.55	27.45
High	5795	8.55	27.45

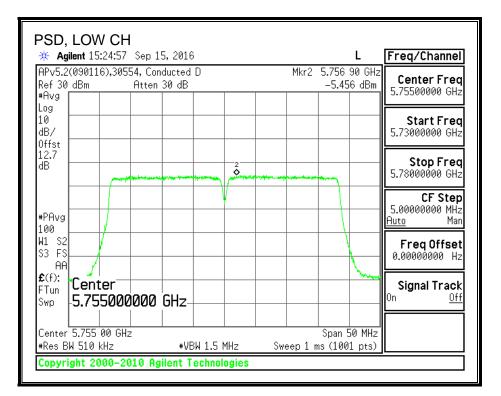
Duty Cycle CF (dB)	0.79	Included in Calculations of Corr'd PSD

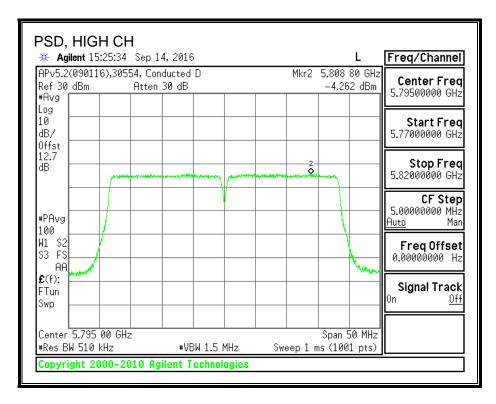
#### **PSD** Results

Channel	Frequency	Chain 1	Chain 2	Total	PSD	PSD
		Meas	Meas	Corr'd	Limit	Margin
		PSD	PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5755	-5.46	-5.48	-1.67	27.45	-29.12
High	5795	-4.26	-4.14	-0.40	27.45	-27.85

Page 661 of 1002

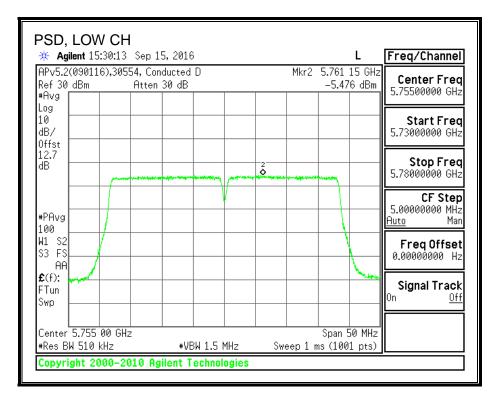
## PSD, CHAIN 1

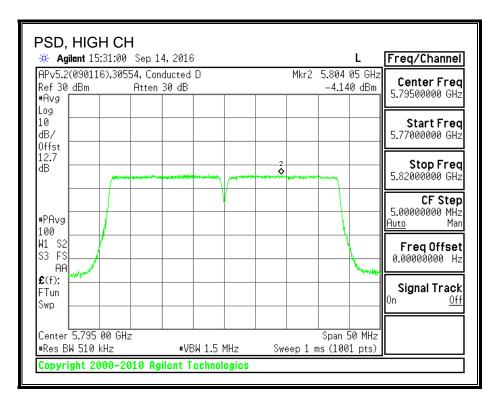




Page 662 of 1002

## PSD, CHAIN 2





Page 663 of 1002

# 8.28. 802.11n HT40 3Tx CDD MODE IN THE 5.8 GHz BAND

# 8.28.1. 6 dB BANDWIDTH

#### <u>LIMITS</u>

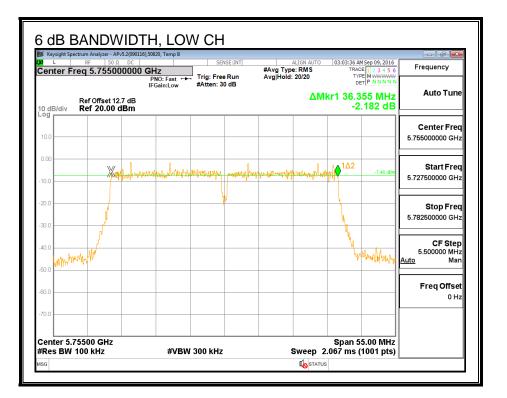
FCC §15.407 (e)

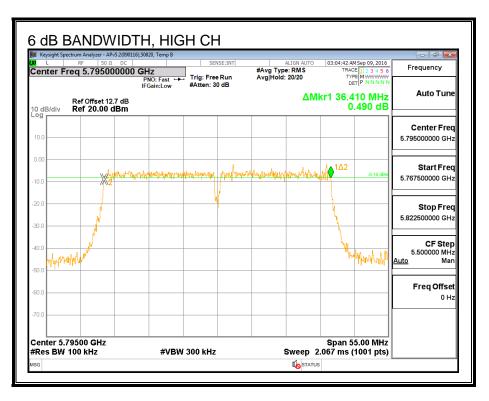
The minimum 6 dB bandwidth shall be at least 500 kHz.

#### **RESULTS**

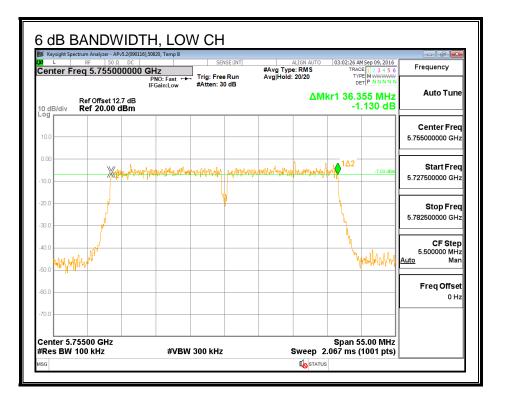
Channel	Frequency	6 dB BW	6 dB BW	6 dB BW	Minimum
		Chain 0	Chain 1	Chain 2	Limit
	(MHz)	(MHz)	(MHz)	(MHz)	(MHz)
Low	5755	36.355	36.355	36.355	0.5
High	5795	36.410	36.410	36.300	0.5

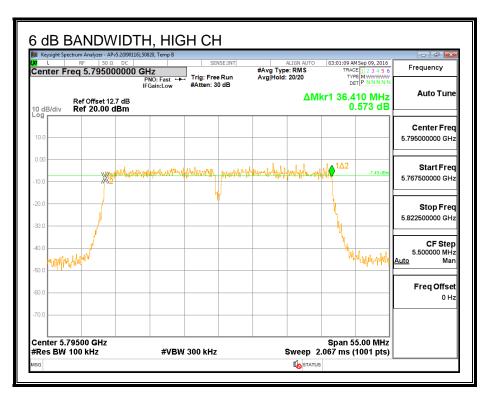
Page 664 of 1002



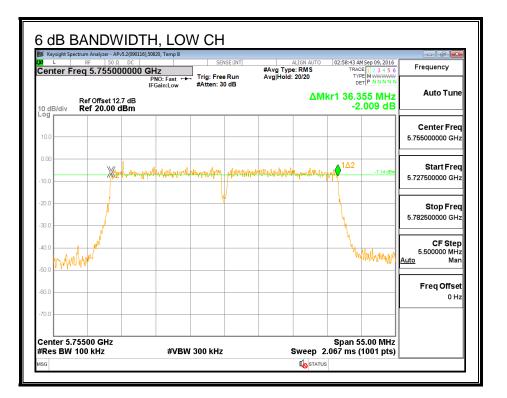


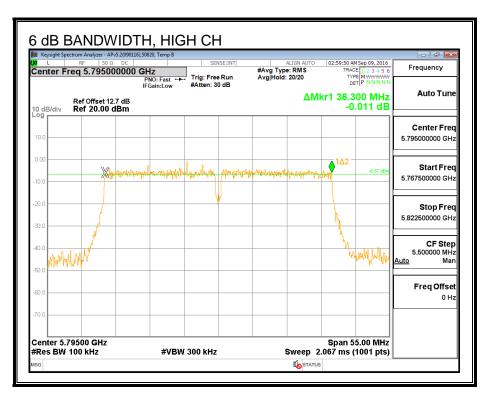
Page 665 of 1002





Page 666 of 1002





Page 667 of 1002

# 8.28.2. **26 dB BANDWIDTH**

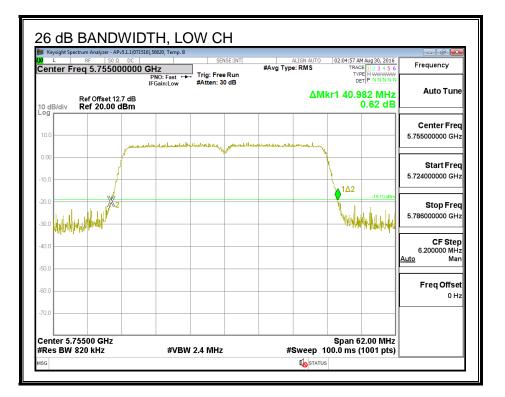
## <u>LIMITS</u>

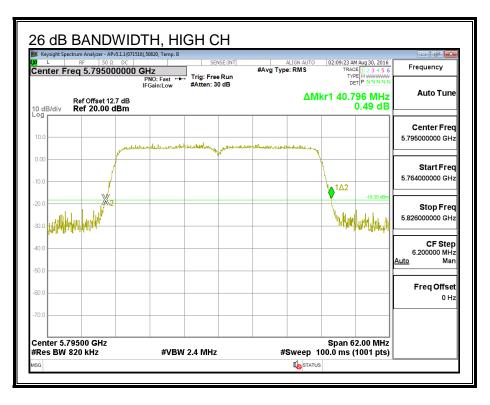
None, for reporting purposes only.

## **RESULTS**

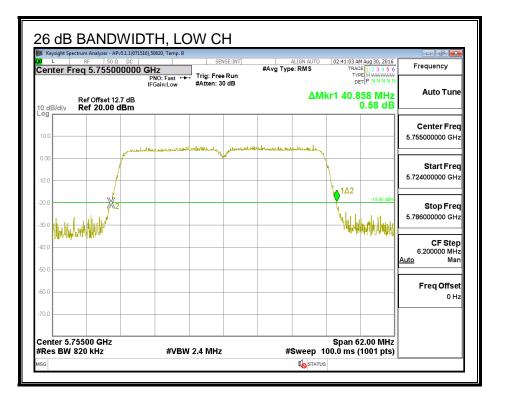
Channel	Frequency	26 dB BW	26 dB BW	26 dB BW
		Chain 0	Chain 1	Chain 2
	(MHz)	(MHz)	(MHz)	(MHz)
Low	5755	40.982	40.858	40.920
High	5795	40.796	40.734	40.796

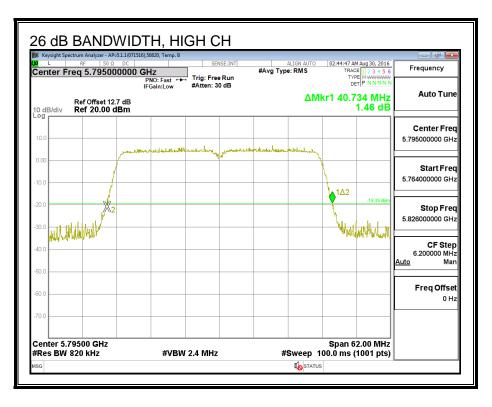
Page 668 of 1002



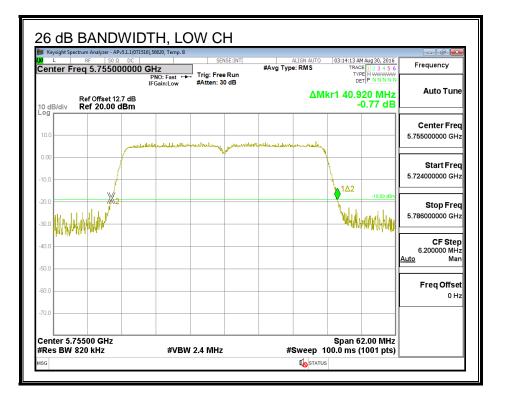


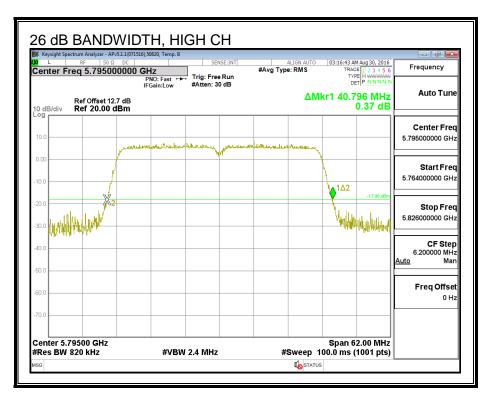
Page 669 of 1002





Page 670 of 1002





Page 671 of 1002

# 8.28.3. 99% BANDWIDTH

#### <u>LIMITS</u>

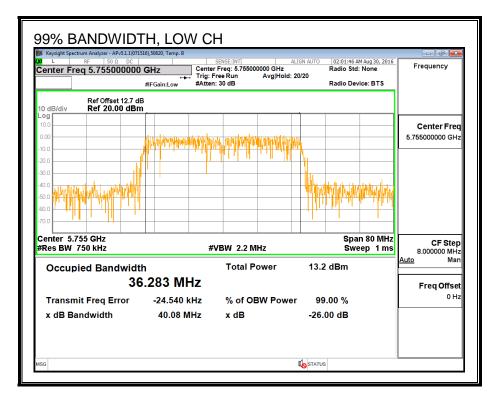
None; for reporting purposes only.

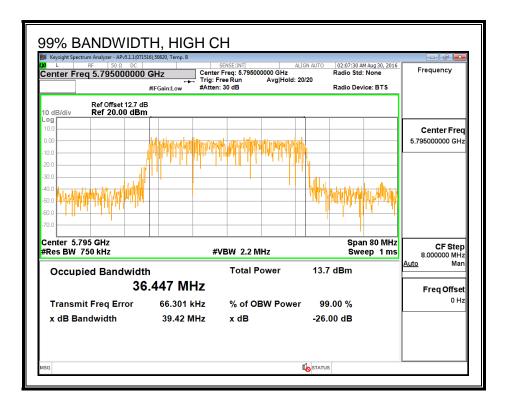
# **RESULTS**

Frequency	99% BW	99% BW	99% BW	
	Chain 0	Chain 1	Chain 2	
(MHz)	(MHz)	(MHz)	(MHz)	
5755	36.283	36.426	36.442	
5795	36.447	36.340	36.252	

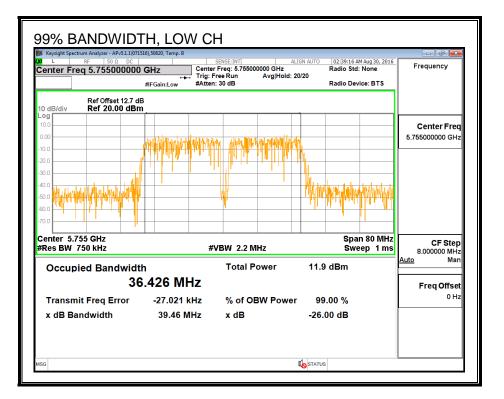
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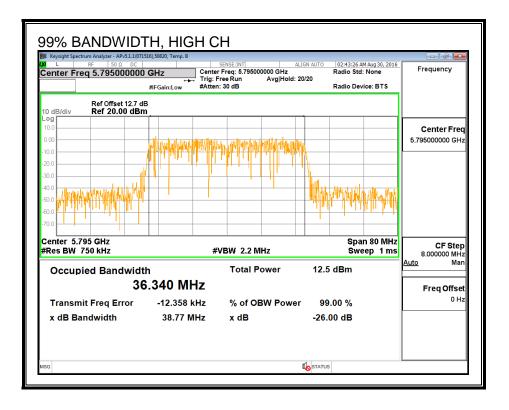
Page 672 of 1002



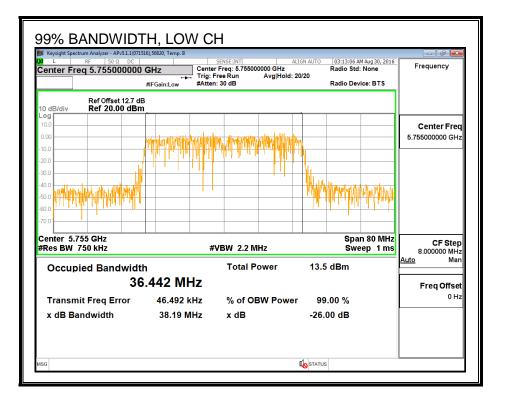


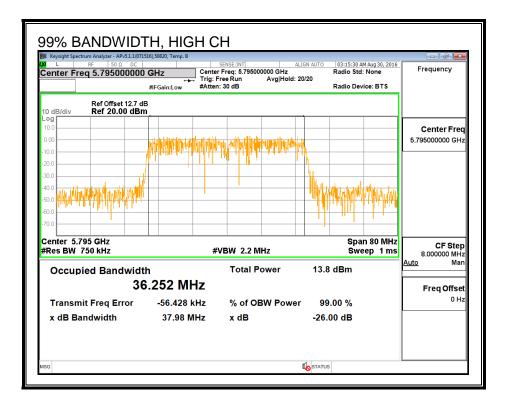
Page 673 of 1002





Page 674 of 1002





Page 675 of 1002

# 8.28.4. AVERAGE POWER (FCC)

#### **LIMITS**

None; for reporting purposes only.

#### TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

#### **RESULTS**

ID: 43573	Date:	9/7/16	
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Channel	Frequency	Chain 0	Chain 1	Chain 2	Total
		Power	Power	Power	Power
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)
Low	5755	12.68	12.69	12.64	17.44
High	5795	12.67	12.71	12.68	17.46

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Page 676 of 1002

# 8.28.5. OUTPUT POWER (FCC)

## <u>LIMITS</u>

FCC §15.407 (a) (3)

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

#### TEST PROCEDURE

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

#### **DIRECTIONAL ANTENNA GAIN**

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

Chain 0	Chain 1	Chain 2	<b>Uncorrelated Chains</b>
Antenna	Antenna	Antenna	Directional
Gain	Gain	Gain	Gain
(dBi)	(dBi)	(dBi)	(dBi)
4.00	6.30	4.70	5.11

Page 677 of 1002

### RESULTS

**ID:** 43573 **Date:** 9/7/16

# Antenna Gain and Limit

Channel	Frequency	Directional	Power
		Gain	Limit
	(MHz)	(dBi)	(dBm)
Low	5755	5.11	30.00
High	5795	5.11	30.00

#### **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)
Low	5755	12.68	12.69	12.64	17.44	30.00	-12.56
High	5795	12.67	12.71	12.68	17.46	30.00	-12.54

Page 678 of 1002

# 8.28.6. PSD (FCC)

# <u>LIMITS</u>

FCC §15.407 (a) (3)

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

### **DIRECTIONAL ANTENNA GAIN**

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

Chain 0	Chain 1	Chain 2	<b>Correlated Chains</b>
Antenna	Antenna	Antenna	Directional
Gain	Gain	Gain	Gain
(dBi)	(dBi)	(dBi)	(dBi)
4.00	6.30	4.70	9.83

Page 679 of 1002

# RESULTS

#### Antenna Gain and Limit

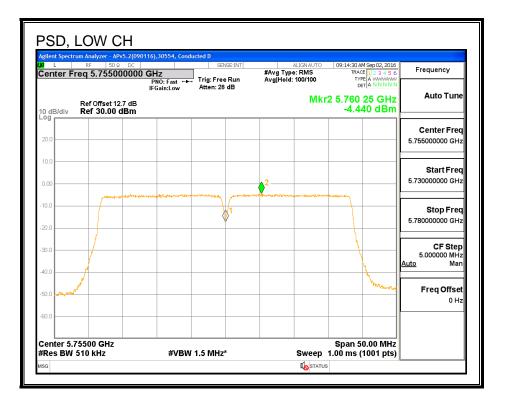
Channel	Frequency	Directional	PSD
		Gain	Limit
	(MHz)	(dBi)	(dBm)
Low	5755	9.83	26.17
High	5795	9.83	26.17

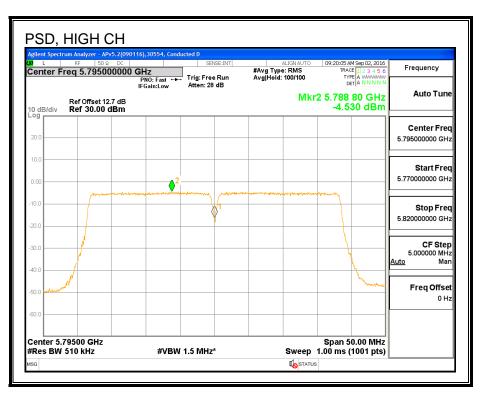
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD

#### **PSD** Results

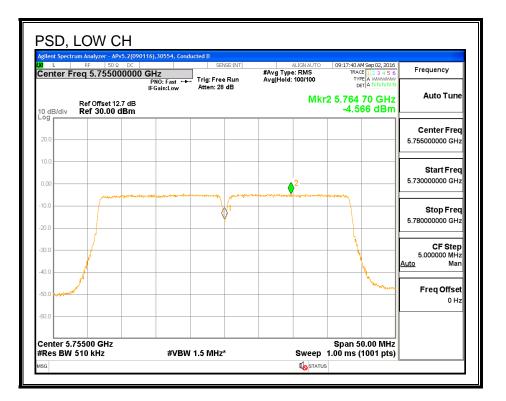
Channel	Frequency	Chain 0	Chain 1	Chain 2	Total	PSD	PSD
		Meas	Meas	Meas	Corr'd	Limit	Margin
		PSD	PSD	PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5755	-4.44	-4.57	-4.64	0.22	26.17	-25.95
High	5795	-4.53	-4.47	-4.58	0.24	26.17	-25.93

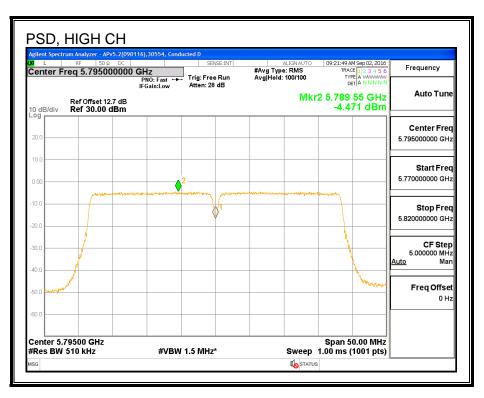
Page 680 of 1002



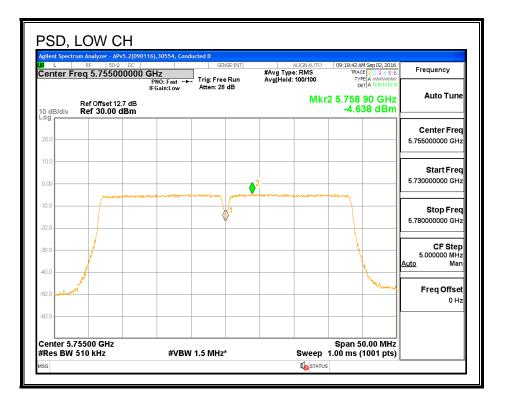


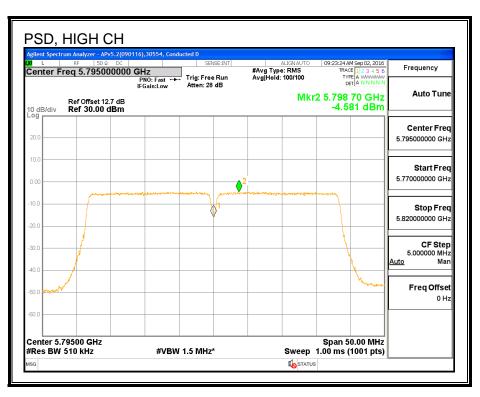
Page 681 of 1002





Page 682 of 1002





Page 683 of 1002

# 8.28.1. AVERAGE POWER (IC)

### <u>LIMITS</u>

None; for reporting purposes only.

### TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

#### **RESULTS**

ID: 43573	Date:	9/7/16	Ī
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Channel	Frequency	Chain 0	Chain 1	Chain 2	Total
		Power	Power	Power	Power
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)
Low	5755	8.82	8.85	8.90	13.63
High	5795	12.67	12.71	12.68	17.46

Page 684 of 1002

# 8.28.2. OUTPUT POWER (IC)

## <u>LIMITS</u>

IC RSS-247 (6.2.4) (1)

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

#### TEST PROCEDURE

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

#### **DIRECTIONAL ANTENNA GAIN**

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

Chain 0	Chain 1	Chain 2	<b>Uncorrelated Chains</b>
Antenna	Antenna	Antenna	Directional
Gain	Gain	Gain	Gain
(dBi)	(dBi)	(dBi)	(dBi)
4.00	6.30	4.70	5.11

Page 685 of 1002

### RESULTS

**ID:** 43573 **Date:** 9/7/16

# Antenna Gain and Limit

Channel	Frequency	Directional	Power	
		Gain	Limit	
	(MHz)	(dBi)	(dBm)	
Low	5755	5.11	30.00	
High	5795	5.11	30.00	

#### **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)
Low	5755	8.82	8.85	8.90	13.63	30.00	-16.37
High	5795	12.67	12.71	12.68	17.46	30.00	-12.54

Page 686 of 1002

8.28.3. PSD (IC)

# <u>LIMITS</u>

IC RSS-247 (6.2.4) (1)

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

## **DIRECTIONAL ANTENNA GAIN**

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

Chain 0	Chain 1	Chain 2	<b>Correlated Chains</b>
Antenna	Antenna	Antenna	Directional
Gain	Gain	Gain	Gain
(dBi)	(dBi)	(dBi)	(dBi)
4.00	6.30	4.70	9.83

Page 687 of 1002

# RESULTS

#### Antenna Gain and Limit

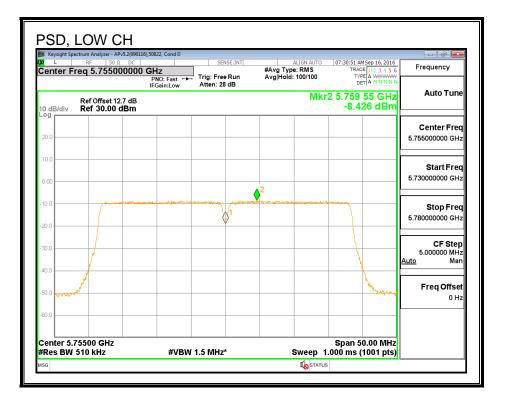
Channel	Frequency	Directional	PSD
		Gain	Limit
	(MHz)	(dBi)	(dBm)
Low	5755	9.83	26.17
High	5795	9.83	26.17

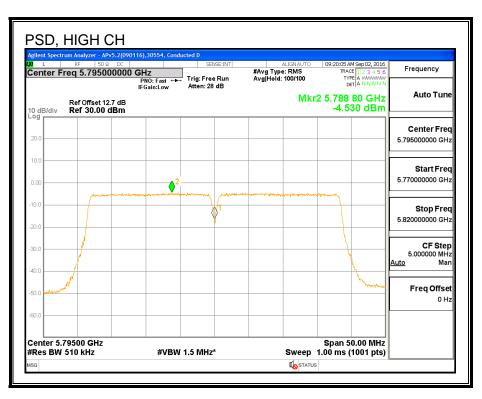
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD

#### **PSD** Results

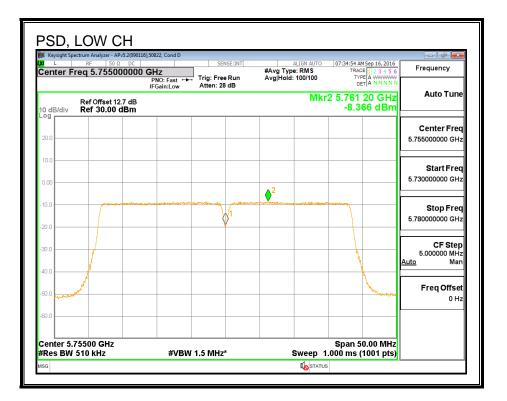
Channel	Frequency	Chain 0	Chain 1	Chain 2	Total	PSD	PSD
		Meas	Meas	Meas	Corr'd	Limit	Margin
		PSD	PSD	PSD	PSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5755	-8.43	-8.37	-8.31	-3.60	26.17	-29.77
High	5795	-4.53	-4.47	-4.58	0.24	26.17	-25.93

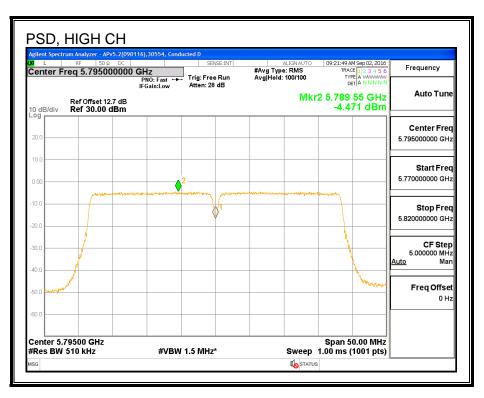
Page 688 of 1002



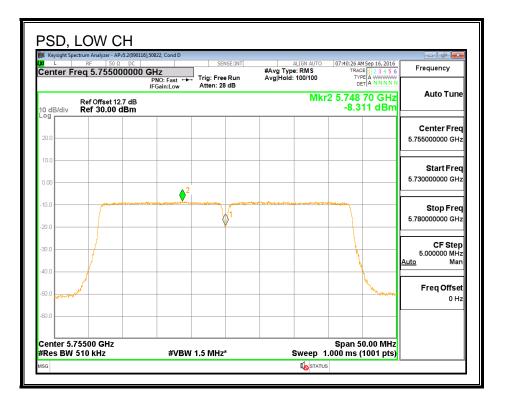


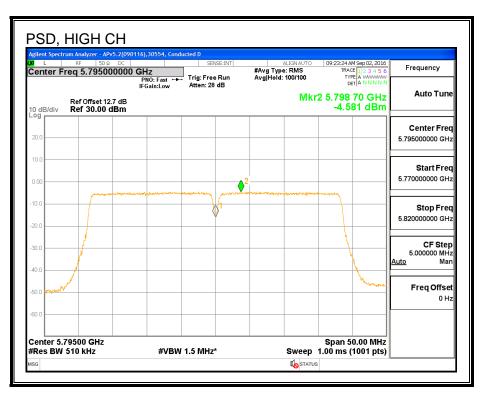
Page 689 of 1002





Page 690 of 1002





Page 691 of 1002

# 8.29. 802.11n HT40 3Tx STBC MODE IN THE 5.8 GHz BAND

# 8.29.1. 6 dB BANDWIDTH

#### **LIMITS**

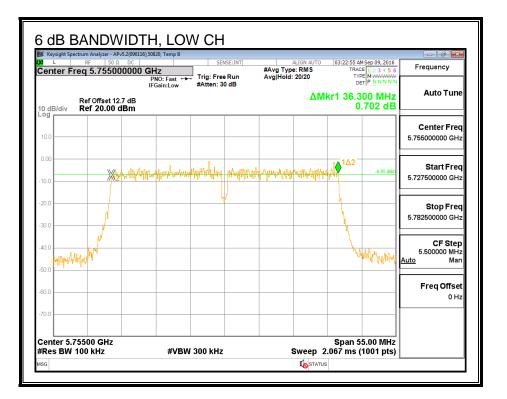
FCC §15.407 (e)

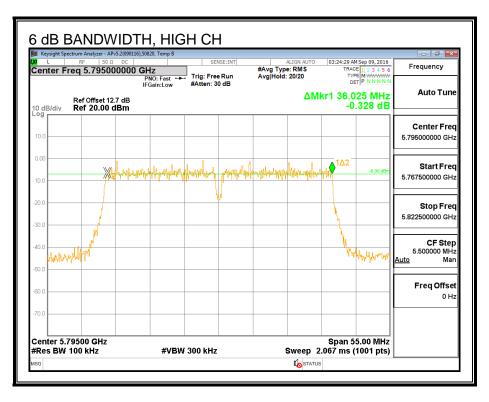
The minimum 6 dB bandwidth shall be at least 500 kHz.

#### **RESULTS**

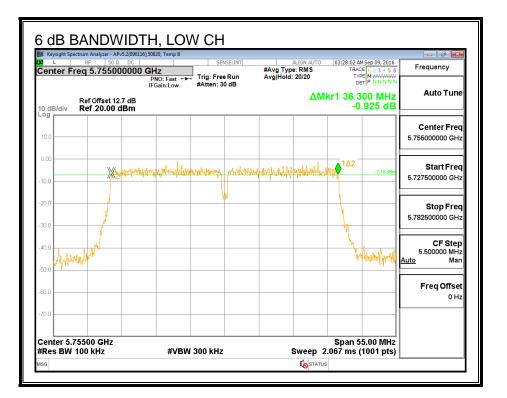
Channel	Frequency	6 dB BW	6 dB BW	6 dB BW	Minimum
		Chain 0	Chain 1	Chain 2	Limit
	(MHz)	(MHz)	(MHz)	(MHz)	(MHz)
Low	5755	36.300	36.300	36.355	0.5
High	5795	36.025	36.355	36.964	0.5

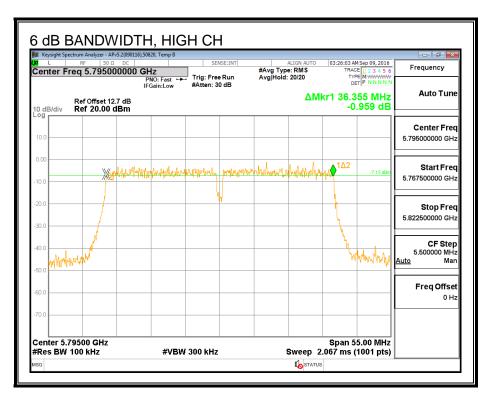
Page 692 of 1002



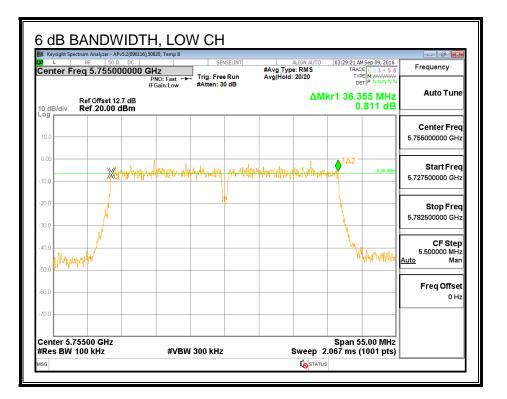


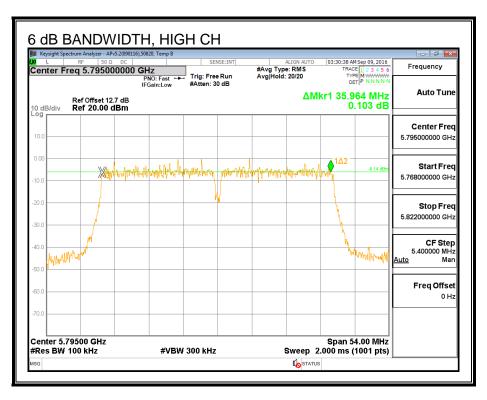
Page 693 of 1002





Page 694 of 1002





Page 695 of 1002

# 8.29.2. **26 dB BANDWIDTH**

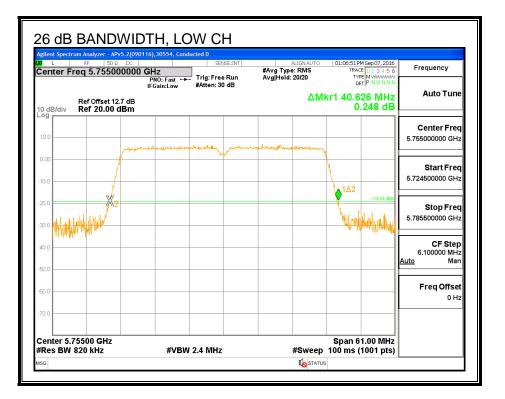
### <u>LIMITS</u>

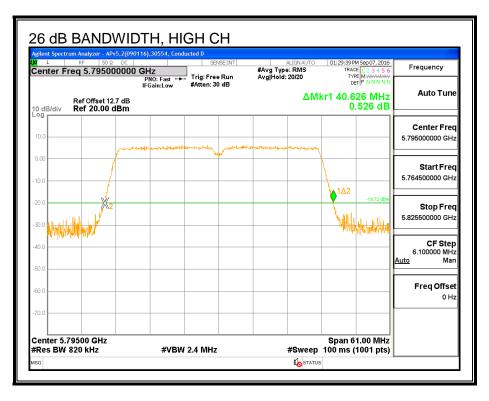
None, for reporting purposes only.

### **RESULTS**

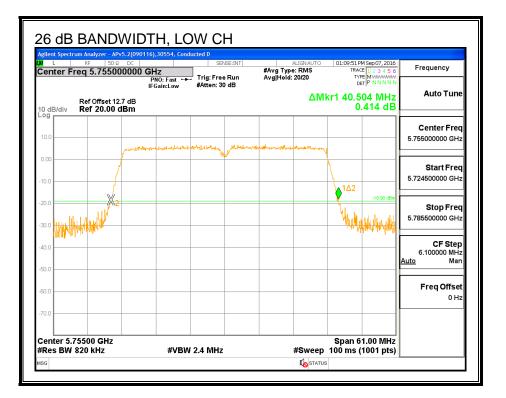
Channel	Frequency	26 dB BW	26 dB BW	26 dB BW
		Chain 0	Chain 1	Chain 2
	(MHz)	(MHz)	(MHz)	(MHz)
Low	5755	40.626	40.504	40.626
High	5795	40.626	40.626	40.443

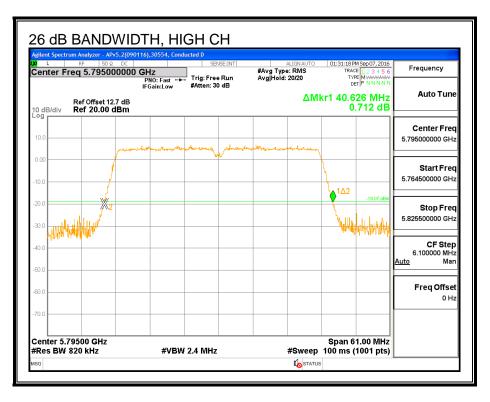
Page 696 of 1002



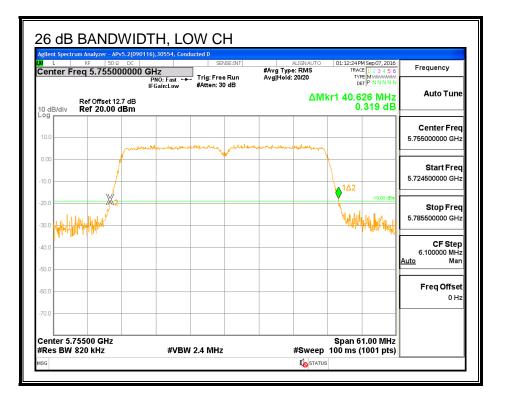


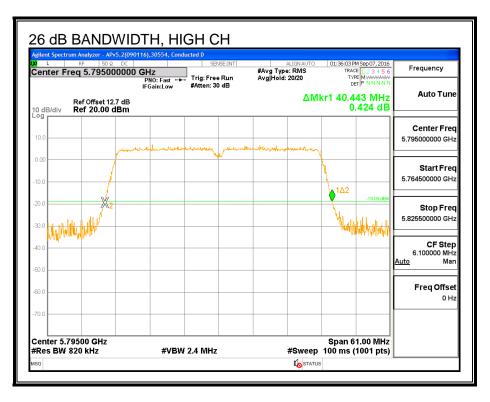
Page 697 of 1002





Page 698 of 1002





Page 699 of 1002

# 8.29.3. 99% BANDWIDTH

#### <u>LIMITS</u>

None; for reporting purposes only.

## **RESULTS**

Frequency	99% BW	99% BW	99% BW
	Chain 0	Chain 1	Chain 2
(MHz)	(MHz)	(MHz)	(MHz)
5755	36.307	36.075	36.298
5795	36.283	36.341	36.373

Page 700 of 1002